e Minim Donnal

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[The MINING JOURNAL is Registered at the General Post Office as a Newspaper, and for Transmission Abroad.]

No. 2479.-Vol. LIII.

LONDON, SATURDAY, FEBRUARY 24, 1883.

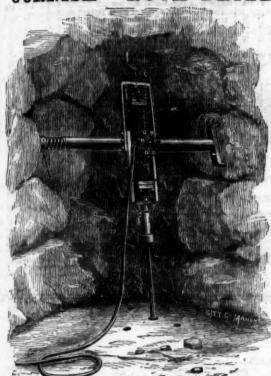
PRICE (WITH THE JOURNAL) SIXPENCE

FIRST SILVER MEDAL, ROYAL CORNWALL POLYTECHNIC

—Highest Award for Effectiveness in Boring, and Economy in
the Consumption of Air.

JUBILEE EXHIBITION, 1882. THE PATENT

ROCK DRILL.



This Drill has been constructed after a long practical experience the requirements necessary for Mines, and has more than realised the expectations of its inventors. The chief objects in view were GREATER DURABILITY AND LESS LIABILITY TO DIS-ARRANGEMENT; but it has also proved itself more EFFECTIVE

AND ECONOMICAL.

We are now prepared to enter into any reasonable arrangement so as to enable users to judge of its merits, as we are thoroughly con-vinced that we can offer the BEST ROCK DRILL IN THE

Farther particulars on application to the Makers-

HOLMAN BROTHERS, CAMBORNE FOUNDRY AND ENGINE WORKS, CAMBORNE, CORNWALL.

MACKEAN'S

All Orders to be addressed to-

MACKEAN AND CO.,

28, PLACE VENDOME, PARIS;

10, DELAHAY STREET, LONDON, S.W.



Belmont Passage, 203, Lawley-street, BIRMINGHAM.

Makers of Williamson's Double Safety Lamp, Williamson's Patent Double Safety Lamp shown half in section.

Medal—For Improved Invention—London, Kensingt n, 1874. Ditto—Excellence of Workmanship—Wrexham 1876

ROCK DRILL." INGERSOLL



LE GROS, MAYNE LEAVER, & CO., 60, Queen Victoria Street, London, E.C.,

SOLE AGENTS FOR THE

SSELDORF

TUBES FOR BOILERS, PERKINS'S, and other HOT-WATER SYSTEMS

For Catalogues of Rock Drills, Air Compressors, Steel or Iron Steam Tubing, Boiler Tubes, Perkins's Tubes, Pneumatic Tabes, and all kinds of Machinery and MINING PLANT, apply to— 60, QUEEN VICTORIA STREET, E.C.

MANGANESE BRONZE & BRASS COMPANY (LIMITED),

SOLE MANUFACTURERS OF PARSONS' PATENT "MANGANESE BRONZE" AND PARSONS' WHITE BRASS.

MANGANESE BRONZE.

MANGANESE BRONZE.

No. 1.—In Ingots, Slabs, Forgings, Rolled Rods, Plates, Sheets, &c. Can be rolled and forged hot and rolled, drawn, and worked cold. Tensile strength—Annealed 30 tons, Cold Rolled and Drawn 40 to 50 tons per square inch.

No. 2.—In Ingots and Castings. Has double the strength of gun metal. Is suitable for Propellers and other simple massive Castings where the greatest strength is required.

No. 3.—In Ingots and Castings. For strong castings of all kinds. Is 50 per cent. stronger than gun metal, and can be cast with facility in any form.

No. 4.—In Ingots and Castings. For all parts of Engines and Machines subjected to friction, especially such as work under heat.

No. 4.—In Ingots and Castings. For all parts of English and Machines subjected to friction, especially such as work under heat. No 5.—Special Bearing Metal. In Ingots and Castings. Wears three times as long as gun metal. For all kinds of Bearings lubricated either with grease or oil.

PARSONS' WHITE BRASS.

No. 1.—In Ingots, Bearings, &c. Wears four or five times as long as gun metal. For Bearings, &c., of moderate size, lubricated with

oil.

No. 2.—For Filling. In Ingots. For filling Main Bearings, Crank
Pin Brasses, Thrust and Side Blocks of Marine Engines and Eearings
of Land and Locomotive Engines. Is used by nearly all the principal
Steamship Companies and Engineers. Experience proves it to be
superior in every respect to all other White Metals.

For further particulars and prices, apply to-P. R. PARSONS, Manager,

LOMBARD STREET, SOUTHWARK, LONDON, S.E.

BLAKE'S LATEST IMPROVED PATENT STONE CRUSHERS.



ALL STRAINS TAKEN BY WROUGHT IRON OR STEEL. DOES TWICE THE WORK OF OLD FORM. SECTIONAL AND EASILY SHIPPED.

"Barrow" Rock Drill

COMPANY. HOSKING AND BLACKWELL'S PATENT.



Their DRILLS have most satisfactorily stood the TEST of LONG and CONTINUOUS WORK in the HARDEST KNOWN ROCK in numerous mines in G. cat Britain and other countries clearly proving

their DURABILITY and POWER. About 200 are now at work driving from three to six times the speed of hand labour, and at from 20 to 30 per cent. less cost per fathom. They can be worked by any miner.

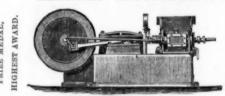
For PRICES, Particulars and Reports of Successful and conomical Working, apply to—

LOAM AND SON. LISKEARD, CORNWALL.

THE PATENT

ECLIPSE" ROCK-DRILL

RELIANCE" AIR-COMPRESSOR



ARE NOW SUPPLIED TO THE

ENGLISH, FOREIGN, AND COLONIAL GOVERNMENTS And are also in use in a number of the LARGEST MINES. RAILWAYS, QUARRIES, AND HARBOUR WORKS IN GREAT BRITAIN AND ABROAD

FOR ILLUSTRATED CATALOGUE AND PRICES apply to-HATHORN & CO., 22, Charing Cross, London, S.W.

ASBESTOS.

ASBESTOS FIRE AND ACID-RESISTING PAINT.

ASBESTOS ENGINE PACKING, ASBESTOS MILLBOARD JOINTING

ASBESTOS BOILER COVERING ASBESTOS CEMENT.

ARE UNRIVALLED.

Price Lists and all information from the UNITED ASBESTOS COMPANY LIMITED):—

HEAD OFFICES: -161, QUEEN VICTORIA STREET, LONDON.

WORKS:-ROME, TURIN, AND GLASGOW.

LEWIS OLRICK AND CO.,
OFFICES: 27, LEADENHALL ST., LONDON, E.C.

WORKS.—ADMIRABLE SITES—LAND CHEAP—COAL
SANCE—RAILWAY and DOCK ACCOMMODATION.
Apply, CHARLES COOMBE TENNANT, Esq., 2, Richmond-terrace,
Whitehall, London, S.W.

FIRST AWARD. SYDNEY. 1879.

PATENT FUSES BICKFORD'S

MELBOURNE, 1881.





























FOR SIMULTANEOUS BLASTING.

for an Improved Method of Simultaneous Blasting. BICKFORD, SMITH AND CO.,

SAFETY AND INSTANTANEOUS FUSES AND IGNITERS

FOR USE IN ALL BLASTING OPERATIONS AND SPECIALLY PREPARED FOR ANY CLIMATE

Note the TRADE MARK: Two Separate threads through centre of Fuse.

BICKFORD, SMITH AND CO.'S Patent Igniters and Instantaneous Fuses for simultaneous blasting are being extensively used at home and abroad. This improved method is the cheapest, simplest, and most dependable ever introduced for simultaneously firing any number of charges. For full particulars, 800 Descriptive Catalogue.

PRICE LISTS, DESCRIPTIVE CATALOGUES, AND SAMPLES TO BE HAD ON APPLICATION.

FACTORIES—TUCKINGMILL CORNWALL; AND ST. HELENS JUNCTION, LANCASHIRE.

HEAD OFFICE—TUCKINGMILL, CORNWALL.

LANCASHIRE OFFICE—ADELPHI BANK CHAMBERS, SOUTH JOHN STREET, LIVERPOOL

LONDON OFFICE—85, GRACECHURCH STREET, E.C.

Every package bears Bickford, Smith, and Co.'s copyright label.

ALEX. WILSON & CO.,

VAUXHALL IRONWORKS,

LONDON, S.W., MANUFACTURERS OF

THE VAUXH L DONKEY PUMPS. THE EXCELSIOR DIRECT-ACTING

Air Compressors. Winding Engines. HOISTING MACHINERY.

ILLUSTRATED AND PRICED CATALOGUES ON APPLICATION

ESTABLISHED 1852.

SYBRY, SEARLS, AND CO.,

CELEBRATED MINING STEEL, BRANDED

Cast Steel, Shear, Blister, Spring, Hammer, and Pick Steel. Special Rock Drill Steel.

Mining Tools, Files, Saws, Hammers, and Picks.

CANNON STEEL WORKS, SHEFFIELD.



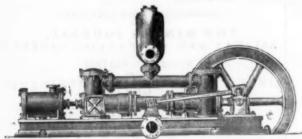
WILLIAM TURNER,

ESTABLISHED 1850

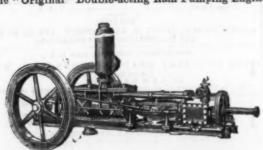
SALFORD, MANCHESTER.

WHEEL PUMPING ENGINES

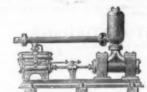
ARE THE ONLY RELIABLE ENGINES FOR STEADY WORK AND ECONOMY.



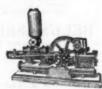
The "Original" Double-acting Ram Pumping Engine.



Direct Double-acting Piston Pumping Engine



Hydraulic Pumping Engine for Collieries. Worked by Natural Head of Water, and saving much manual



ouble-acting Horizontal Pumping Engine. For Feeding Boilers, Gas Works, Tanneries, Breweries, and all Pumping Purpose

PUMPING ENGINES of all descriptions.

WINDING Ditto.

AIR COMPRESSORS.

HYDRAULIC ENGINES.

VALVES for Steam, Water, &c.



WIPPERMANN AND LEWIS'S PATENT AIR INJECTOR.

These Injectors are being universally adopted for Pumping Engines for Collieries & Waterworks



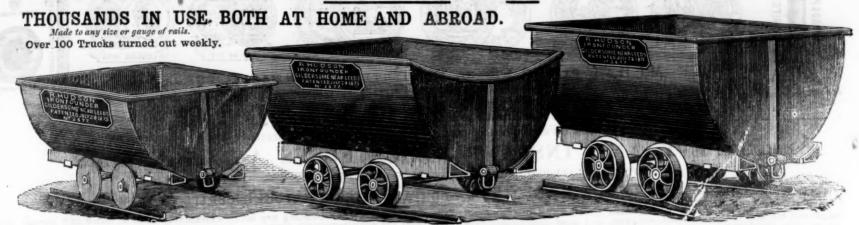
The Salford Pump.

R. HUDSON'S PATENT STEEL

LIGHTEST, STRONGEST, AND MOST CAPACIOUS MADE.

PATENTED EUROPE, AMERICA, AND BRITISH SOUTH AFRICA, No. 2677, No. 3782, No. 102, AND No. 4683 WITH OR WITHOUT "END" DOORS AND "SWIVELLING" UNDERCARRIAGE FOR

TIPPING AT EITHER SIDE OR END OF RAILS.



R. HUDSON, GILDERSOME FOUNDRY, NEAR LEEDS.

BELL'S ASBESTOS.

BELL'S PURE ASBESTOS PLAITED YARN PACKING.

This is the best and most economical Piston Packing in the market for High and Low Pressure Stationary Engines. Of course there are many worthless imitations of a Packing so universally approved of, but I am the Original Maker and Sole Manufacturer of the genuine article, as used in the British and German Navies. To avoid imposition, users should require to see my Trade Mark, which is on every 10 ft. length of the Packing made by me, and without this none is genuine.



BELL'S ASBESTOS AND INDIA-RUBBER WOVEN TAPE,

RUBBER WOVEN TAPE,
For making every class of steam and water joint.
It can be bent by hand, without puckering, to
the form required, and is especially useful in
making joints of manhole and mudhole doors;
for this latter purpose it is kept in rolls of 100
feet, in warlous widths from 1 inch to 2½ inches
wide, by ½ inch to 3½ inch thick. Manhole cover
joints made of this material can be lifted 20 times
before renewal is necessary. This material is also
made in sheets about 40 inches square, from ½
inch thick upwards, and each sheet bears my
Trade Mark to protect users against initiations.
Every 10 feet length of the tape has a label attached bearing my Trade Mark, and users are requested to see that this label is attached to prevent imposition by worthless imitations.

BELL'S ASBESTOS FELT,

A cheap material to be placed between ceiling and upper floor, to prevent

BELL'S ASBESTOS AND HAIR FELT COVERING,

For Hot Water and Steam Pipes, to Prevent Radiation and Ensure Transmission of Heat; also to Protect from Frost.

BELL'S ASBESTOS BOILER COVER-ING COMPOSITION,

For Coating the Boilers of every kind of Marine and Stationary Engine.

It is non-combustible, and can be easily and quickly applied at any time whether steam is up or not. It adheres to iron and metals and preserves them from rust.

The following Testimonial refers to the Asbestos Boiler Covering Composition:—

The Maxim Weston Electric Company (Limited), 29, Bankside, Mr. John Bell.

DEAR SIR,—In answer to your request, I beg to inform you that I find the hermometer placed 3 feet above the boilers now stands at 93°; before your covering was put on it used to stand at 126°. With regard to the saving in fuel I am unable to speak very accurately, as the boilers were not working long enough before being covered to ascertain the amount of fuel that would be consumed in an ordinary run; but I feel quite justified in saying that we burn less by about 5 cuts, per night than we were doing, and I shall be glad at any time to show the boilers to any one who may wish to see them, as I consider yours the best covering that I have up to the present seen.

Yours faithfully, (Signed) J. H. CUNDALL, Works Manager.

FOR GAS FIRES.

BELL'S PURE CLOSELY WOVEN ASBESTOS CLOTH,

For Protection against Fire.

BELL'S ASBESTOS YARN AND SOAP-STONE PACKING,

For Locomotive Engines, Cranes, &c.
The following Testimonial refers to this packing;—
Festining Railway, Locomotive Superintendent's Office,
Portmadoc, Jan. 13tû, 1883.
Mr. John Bell, 118, Southwark-street, S.E.

Mr. John Bell, 118, Southwark-street, S.E.

DEAR SIR,—I have much pleasure in saying that the Asbestos Yarn and Soapstone Packing gives every satisfaction; indeed, better than we expected. We have a locomotive packed with it, and has been running five months (and think of the piston speed with our small wheels). I think the Soapstone a great improvement, as it keeps the packing clastic, and prevents it getting hard. I arrivery pleased with its working, and also the very low price for such good lasting packing. The Asbestos Yarn we find is very useful, and answers admirably.

(Signed) Yours truly, W. WILLIAMS.

BELL'S ASBESTOS ROLLED CLOTH PACKING,

PACKING,
For Marine Engines. Every 10 feet length of the above Packings has a label attached bearing my Trade Mark, without which none is genuine. The following Testimonial refers to the Asbestos Cloth Packing:—
S.S. "Norfolk," S.W. India Docks, London, February 28th, 1882.

John Bell, Esq. "Rir,—I have great pleasure in reporting on your Asbestos Cloth Rope Packing which you sent me on trial. I tried it in one of two H.P. Piston Rods, and it ran 90 days without repacking, The other H.P. Piston Rod was packed with a similar form of packing, not composed of Asbestos, and was repacked 10 times during the 90 days. I have recommended it both at Sydney and Melbourne, and shall do my best to take this packing in whatever steamers I may have to do with.

W. W. PROPHET, Chief Engineer S.S. "Norfolk."

BELL'S ASBESTOS BLOCKS & LUMPS BELL'S SPECIAL LONDON - MADE ASBESTOS MILLBOARD.

For Dry Steam Joints, Electric Dynamo Machines, &c.; made in sheets mea-suring about 40 inches square, from 1-64th inch to 1 inch, and ½ milli-metre to 25 millimetres thick. Each sheet bears my Trade Mark, with-out which none is genuine.

BELL'S ASBESTOS CORDAGE. For Fire Escapes and Window Sash Lines, &c

ILLUSTRATED PRICED CATALOGUE ON APPLICATION TO

JOHN BELL, ASBESTOS WORKS, 118, SOUTHWARK STREET, LONDON;

OR THE BRANCH WAREHOUSES-

VICTORIA BUILDINGS, DEANSGATE, MANCHESTER; 11 AND 13, ST. VINCENT

PLACE, GLASGOW; 21, RITTER STRASSE, BERLIN.



NOTICE OF REMOVAL. JOHN SPENCER, FORMERLY OF WEST BROMWICH, NOW OF THE GLOBE TUBE WORKS.

LATE WHITEHOUSE AND Co. (LIMITED). ESTABLISHED 1847.

WEDNESBURY.

THE "BEAUMONT" PATENT PERCUSSIVE ROCK DRILL.



(BEAUMONT AND FOSTER'S PATENT.)

The "BEAUMONT" DRILL is now

offered to the public.

For the last three years it has been solely used with complete success by the Aqueous Works and Diamond Rock Boring Company (Limited), and Messrs. Beaumont and Co.

in their several large contracts.

During this time it has been s improved and developed as to make it without doubt the best Percussive Rock Drill offered for Tunnelling, Mining, or Quarrying Work.
Price and prospectus on application to

the Manufacturer,-JOSEPH FOSTER,

MINING ENGINEE

BOW LANE IRONWORKS PRESTON, LANCASHIRE.

THE AQUEOUS WORKS AND DIAMOND ROCK-BORING COMPANY (LIMITED).

CROWN WORKS, GUILDFORD STREET, YORK ROAD LAMBETH, LONDON.

MESSES. BEAUMONT AND CO., VICTORIA STREET, S.W., WESTMINSTER, LONDON.

Tripods, Tunnelling Carriages, Gadding Cars, Air Compressors, Air Pipes, and other Mining Machinery supplied.

A LEXANDER SMITH, M. Inst. C. E., CONSULTING A ENGINEER and VALUER of IRONWORKS,
MINING, RAILWAY, ENGINEERING, and other PROPERTY,
PLANT, and MACHINERY,
PRIORY STREET, DUDLEY

4, EURLINGTON CHAMBERS, NEW STREET, BIRMINGHAM

Mr. SMITH has been retained for nearly 20 years by some of the most prominent firms, and has conducted many of the largest valuations that have taken place in the kingdom. Valuations for Stock Taking or any other purpose upon very reasonable terms

MR. P. S. HAMILTON (late Chief Commissioner of Mines for the Province of Nova Scotia), PRACTICAL GEOLOGIST, MINING AGENT, and MINING ENGINEER, HALFAX, NOVA SCOTIA. PURCHASES and SALES of MINING PROPERTY effected, with carefu re-gard to the interests of clients

ESTABLISHED NEARLY FIFTY YEARS

THE MINING JOURNAL,

RAILWAY AND COMMERCIAL GAZETTE,

WIDEST CIRCULATION

MINERS, METALLURGISTS, ENGINEERS,

FINANCIAL AND COMMERCIAL MEN

THROUGHOUT THE GLOBE.

PRICE SIXPENCE WEEKLY.

SUBSCRIPTION: Great Britain Postal Union

.. £1 4 0 per annum.

LONDON: MINING JOURNAL OFFICE, 26, FLEET STREET AND TO BE HAD OF

ALL BOOKSELLERS AND NEWSAGENTS.

Just published, cloth limp, price 1s. 6d.,

THE COLLIERY READY-RECKONER AND WAGES CALCULATOR.

"Will be the means of preventing many disputes between pay clerks and colliers."—Afring Journal.

To be had on application at the MINING JOURNAL Office 26. Fleet-street. E. C.

THE MINING RECORD, Only \$5:00 a year.

Foreign Postage.

61, BROADWAY, NEW YORK.

Is the ONLY PAPER in the United States that gives FULL LATEST ACCOUNT from all the GREAT GOLD, SILVER, IRON, and COAL MINES of AMERICA. ORDERS EXECUTED FOR MINING STOCKS. Information free ALEX. ROFT. CHISOLM, Proprietor. Lenden Office—H. CARTER, Manager, 26, King William-street, London.

Pumping Engines for Mines, Water Works, Sewage Works, and General Purposes. CATALOGUES ON

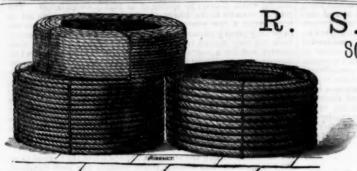
PUMPING & MINING MACHINERY.

HATHORN, DAVEY, & Co., LEEDS.

Hydraulic Pumps, Winding Engines. Air Compressors. Man Engines. Capstans, &c., &c.

APPLICATION.

has given he is a inferrer in accommend to the Government of English the Eng



FOREIGN MINING AND METALLURGY.

The Belgian coal trade has been firm so far as industrial coal is concerned, but it has continued feeble for household coal. An adju-

The Belgian coal trade has been firm so far as industrial coal is concerned, but it has continued feeble for household coal. An adjudication of coal upon Belgian Government account, is expected to take place in the course of March. It will represent contracts to the aggregate amount of about 300,000 tons. This adjudication will afford a fairly accurate idea of the tone of the market; but it is not expected that the average rate of the tenders will be less than 7s. per ton. This is the present rate for engine coal in the Liege basin, as well as in the Hainaut. Business in household coal has become more and more scarce. In the case of large orders reductions would probable be made from the rates nominally current. The extraction of coal in Belgium in 1879 amounted to 15,447,000 tons; in 1880 to 16,866,000 tons; in 1881 to 16,873,000 tons; and in 1882 to 17,485,000 tons. The importation of coal into Belgium in 1879 amounted to 744,000 tons; in 1881 to 1,048,000 tons; and in 1882 to 1,048,000 tons; and in 1882 to 1,048,000 tons; and in 1882 to 1,025,000 tons. The estimated consumption of coal in Belgium in 1879 was 11,104,000 tons; in 1881, 5,772,000 tons; in 1881, 12,120,71,000 tons; and in 1882, 12,2690,000 tons. It should be observed that these figures comprise coke as well as coal, 100 tons of coal being taken to represent every 70 tons of coke. But for this the progress which the returns indicate would not have been observable—at any rate, to a similar extent.

The Belgian iron trade remains in much the same state. The rates current for pig are too high, having regard to the position of the manufactured iron trade. Ruglish pig has only been feebly maintained at about 2t. 8s. per ton. In the Luxembourg refinery pig has been supported with firmness at 2t. 6s, per ton, while casting pig has been supported with firmness at 2t. 6s, per ton, while casting pig has been supported with firmness at 2t. 6s, per ton, while casting pig has been supported with firmness at 2t. 6s, per ton, while casting pig has been supporte

tons of iron.

The forgemasters of the North and East of France have just held a meeting, and have decided to offer an energetic resistance to demands for lower rates made by Parisian ironmasters. The meeting decided to maintain No. 2 merchants' iron at 7l. 4s. per ton, delivered on trucks at La Chapelle, Paris. Parisian iron merchants have fixed the quotation for merchants' iron at 7l. 16s. per ton. The condition of the German iron trade has slightly improved, the demand having revived, while several adjudications for materiel has afforded a little new employment to the ironworks and the mechanical construction establishments. Casting and Bessemer pig have been in a little more request; prices have been maintained, thanks to measures taken for restricting the production. As regards iron the situation appears also to have slightly improved; sales have certainly been made at 6l. 10s. per ton, but these sales have been principally effected by merchants, as the proprietors of rolling-mills have assumed a firmer tone, and hope to be able to establish an advance of 5s. per ton. The production of pig in Germany in December amounted to 283,758 tons, the greater part of which was puddled pig. The production in December, 1881, was 280,826 tons. For the whole of 1882 the production of pig in Germany is estimated at 3,170,937 tons. Tenders have just been received at Magdeburg for eight passenger locomotives, at 1725l, per engine. The German coal trade has continued dull. The demand for industrial coal has experienced a slight revival, but still the production is in excess of the consumption, and hence a downward tendency in quotations, especially in Westphalia. The imports of English coal into Germany in 1882 amounted to 1,251,085 tons.

CONVICT LABOUR FOR MINES.

a difficult subjects with which the statesman or political economist has to deal, for, whilst it is essential that the punishment of crime should be heavy and permanent in proportion to its enormity, it is equally essential that the criminal should have an opportunity, after he has motorcome the punishment awarded to him of coving his equally essential that the criminal should have an opportunity, after he has undergone the punishment awarded to him, of earning his livelihood honestly, so that he may have no excuse for becoming a constant member of the criminal class. It would be unreasonable to demand that the convicted criminal should, upon the completion of his punishment, be restored to the position he previously occupied, since that would remove the encouragement to honest industry which it is most desirable to protect; but unless the returned criminal be afforded an opportunity to obtain food, lodging, and raiment at least equal to that which he has received whilst in prison his return to crime is inevitable. The Howard Association, instituted under the patronage of the late Lord Brougham for the promotion of the best methods of criminal treatment and crime prevention has already done a large amount of good for criminals and for the community, and it has recently collected some information through its foreign correspondents which will be of interest to the readers of the Mining Journal, since it is shown that convict labour can be advantageously employed in mining, and that too without detriment to the free

The details furnished by Mr. William Tallack, the secretary of in their work.

NEWALL AND SOLE PATENTEES OF UNTWISTED WIRE ROPE.

Iron and Steel Ropes of the highest quality for Collieries, Railways, Suspension Bridges, &c.

PATENT STEEL FLEXIBLE ROPES AND HAWSERS. IRON STEEL, AND COPPER CORDS. LIGHTNING CONDUCTORS. COPPER CABLES of high Conductivity for Electric Light and Power.

London: 130, STRAND, W.C. Liverpool: 36, WATERLOO ROAD. Glasgow: 68, ANDERSTON QUAY.
MANUFACTORY: GATESHEAD-ON-TYNE.

ESTABLISHED 1825.

LEWIS AND

WOLVERHAMPTON.

Lapwelded & Buttwelded Wrought-iron, Steel, or Homogeneous Tubes

COLLIERY OR MINING PURPOSE.

FRANCIS MORTON AND CO., LIMITED, LIVERPOOL.

GALVANISED CORRUGATED IRON ROOFS, BUILDINGS, AND SHEDDING,

WHICH THEY HAVE EXTENSIVELY ERECTED FOR THE REQUIREMENTS OF

Forges, Rolling Mills, Puddling Sheds, Ironworks, and Collieries Erected Complete in this Country, or prepared to Plan for Erection Abroad,



this Country, or prepared to Plan
GALVANISED OR PAINTED CORRUGATED IRON ROOFING PLATES and
TILLES. HEAVY CORRUGATED IRON
PLATES for fireproof floors, roadways,
parapets, &c. (for producing which F. M and
Co. have recently laid down powerful Hyydraulic Machinery). Wrought-iron Tanks,
Guttering, and General Constructional
Wrought Ironwork.
DESIGNS PREPARED, AND ILLUSTRATED
DESCRIPTIVE CATALOGUES FORWARDED

DESCRIPTIVE CATALOGUES FORWARDED ON APPLICATION



GENERAL STORE FOR WHARF, ETC.

London Office: 1, Delahay Street (first door out of Great George Street), Westminster, S.W.

SONS. TURTON AND THOMAS

MANUFACTURERS OF

MINING STEEL of every description. CAST STEEL FOR TOOLS. CHISEL SHEAR BLISTER & SPRING STEEL MINING TOOLS & FILES of superior quality.

EDGE TOOLS, HAMMERS, PICKS, and all kinds of TOOLS for RAILWAYS, ENGINEERS, CONTRACTORS, and PLATELAYERS' LOCOMOTIVE ENGINE, RAILWAY CARRIAGE and WAGON SPRINGS and BUFFERS.

SHEAF WORKS SPRING WORKS, SHEFFIELD. LONDON OFFICES-90, CANNON STREET, E.C. PARIS DEPOT-12, RUE DES ARCHIVES

the Howard Association, were obtained by him from the Governor of the State Prison at Topeka, Kansas, U.S., who reports that a daily average of about 650 convicts are inmates of that prison, under sentences of from one year to the full term of life. Of these 256 are let out to contractors for carriage making, 40 for boot and shoe manufacturing, and 52 to furniture and harness makers—all the work being done in the prison. The average daily hire paid by the employers for each convict's labour has been, during the past two years, Is. 6d. per head. The total cost of each prisoner, including salaries of officers, is Is. 10d. per day. So that the prison has not been quite self supporting. But it is about to become a source of actual revenue to the State, mainly through the working of a coal nine on or near the prison. Tremises. About 120 of the convicts are employed in this mine. They have sunk a shaft 733 ft. deep, made 2800 ft. of drivages, 800 ft. of main airway, laid 5500 ft. of railway track in the mine, besides timbering and walling, and have also constructed 70 pit cars and all the mining tools. Nearly 200 convicts and all we mining tools. Nearly 200 convicts and the daily ment of convict labour is that it deprives unconvicted workmen of a convict labour is that it deprives unconvicted workmen of a convict labour is that it deprives unconvicted workmen of a convict labour is that it deprives unconvicted workmen of a convict labour is that it deprives unconvicted workmen of a convict labour is that it deprives unconvicted workmen of a convict labour is that it deprives unconvicted workmen of a convict labour is that it deprives unconvicted workmen of a convict labour is that it deprives unconvicted workmen of a convict labour is that it deprives unconvicted work the time of convict labour is that it deprives unconvicted workmen of a convict labour is that it deprives unconvicted workmen of a convict labour is that it deprives unconvicted workmen of convict labour is that it deprives unconvicted workmen of a con n.ine on or near the prison premises.

n.ine on or near the prison premises.

n.ine on or near the prison premises.

employed in this mine. They have sank a shaft 733 it. deep. 2800 ft. of drivages, 800 ft. of main airway, laid 5500 ft. of railway track in the mine, besides timbering and walling, and have also constructed 70 pit cars and all the mining tools. Nearly 200 convicts will soon be employed in the colliery. The costs of these preliminary operations have been 9000l., against which must be placed 8400l., the value of the coal already taken out. Henceforth the profits will largely exceed the cost of working; and the directors report that the prison can now "easily sustain itself and its officers." It supplies coal to nine large institutions in the State. The laws of Kansas coal to nine large institutions in the State. The laws of Kansas coal to nine large institutions in the State. The laws of Kansas coal to nine large institutions in the past two years 33,500l., or three years is far more deterrent, more merciful, more reformation, and ultimately, also, more economical than any form of the corresponding to the American above alluded to the American a in cash to the State Treasury. During the past two years 33,500t, or nearly \$170,000 in cash has thus been paid in from the earnings of the convicts of this establishment. And, in marked contrast to the high nominal value attached on paper to the earnings of English or nearly \$170,000 in cash has thus been paid in from the earnings of the convicts of this establishment. And, in marked contrast to the high nominal value attached on paper to the earnings of English convicts in building, and on the public works, it is officially reported of the Kansas prison that "No account has been taken of the earnings of English repairs of buildings." The prison surgeon reports 14 deaths in the two years, or just 1 per cent. per annum. He adds that the convicts engaged in mining have "a far less percentage of sickness than any tomater ally they have decidedly decreased. The average numbers they can be prison population;" and the governor says that the men, who have read 4500 volumes during the year are interested other class of the prison population;" and the governor says that the men, who have read 4500 volumes during the year are interested also specially diminishes crime.

Original Correspondence.

CANADA, AND THE RAILWAY INTERESTS.

The people of Canada have been very much surprised by an article that appeared in a London monetary periodical of Dec. 23, styled "The great land speculation in Canada and the companies affected by it." It is amusing to notice how the writer of the article affected by it." It is amusing to notice how the writer of the article has given himself away, and in writing as he has done shown that he is a willing partisan of the Grand Trunk Railway. No other inference can be drawn from his article, "Imprimis." "What shadow of justice—I had almost said of right—has the Dominion Government in thus authorising competition with the railway which, while it has made Canada what it is, has hitherto been a sort of by-word and reproach in the investment market?" The Mining Journal of Dec. 30 has answered the question. The Great Western Railway Company of England has monopolised the trade, and there is a cry for cometition by the people and the trade, particularly with regard to the of England has monopole and the trade, particularly with regard to the petition by the people and the trade, particularly with regard to the mineral tradic in Wales. In Canada our Government desires to act in accordance with the views of the people, if they did not they in accordance with the vast of the people, it also would soon have to resign and other men would be found to fill their places. So far as the Grand Trunk Railway is concerned it was an investment is railway shares as much as in any other part of the world. The people who invest their money have a perfect right to enquire about the management of the company they invest in, but we Canadians claim that the Government of Canada has no more considered to reside to represent the company they invest in, but we canadians claim that the Government of Canada has no more we Canadians claim that the Government of Canada has no more right to be asked to protect the interests of a railway corporation or amining corporation any more than if a corporation composed of English stockholders in a railway enterprise in the States should ask the Government of the United States to protect their interest; yet the Government of Canada and the Canadian people have given in interest or principal; yet the people of Canada have borne with gross mismanagement for a number of years, and the laws of our country have been systematically defied by the Grand Trunk Railway. Mr. John Bell, Q.C., in the country of Hastings, solicitor the Canada Trunk Railway. Railway. Mr. John Bell, Q.C., in the county of the truth of that for the Grand Trunk Railway, is well aware of the truth of that

statement.

The statute directs three classes of cars to run daily between Toronto and Montreal, that the rate of fare shall be 2d. (Halifax carrency) for the first class, 1½d. for the second class, and 1d. for the third class. I should like to ask Mr. Joseph Hickson, Manager of the Grand Trunk Railway, if for the last 10 years any train has ever started or run in accordance with the provisions of the statute? I should like to ask the London monetary authority if, as it says, it should like to ask the London monetary attached to Eans, in seeks the "truth," why it should ever have attacked the Canadian people in the manner it has done? Does it not know the truth or does it misrepresent it? The best thing the Grand Trunk Railway can do is to pay their debts, and pay back the \$4,000,000 that belong to the Canadian people.

to the Canadian people. In that remarkable article (which was written on purpose to depreciate the shares of the North-west Land Company, and is only equalled by some of the tricks in the vicinity of Wall-street) it is said, "Now let us look at the basis upon which the Canada North-west Land Company (Limited) rests. This company bought 5,000,000 acres of land from the Canadian Pacific Railway Company at the price of 12s. per acre. But the Canadian Pacific Railway Company, the vendors of that land, are at this moment offering land at a uniform 128. per acre. Due the Canadian Facilic Railway Company, the vendors of that land, are at this moment offering land at a uniform price of 10s. per acre, with a rebate to the settler of 5s. for each acre brought under cultivation within four years. In other words, the Canadian Pacific—the vendors to the Canada North-west Land Com-Canadian Pacific—the vendors to the Canada North-west Land Company—are offering land to the general public at 5s. per acre net. Mark the conflict of interests implied in all this. And where is the 'pull' obtained by the Canada North-west Land Company? Why should settlers pay 12s. per acre to them when they can get it for a net 5s. per acre from the Canada Pacific Railway Company themselves? But this is not all. 'Manitoba' himself states—what is known to be a fact by anyone who reads the advertisements in the daily papers—that the Dominion Government offers a free grant of 160 acres to each immigrant, besides power of pre-emption in daily papers—that the Dominion Government offers a free grant or 160 acres to each immigrant, besides power of pre-emption in respect of 160 acres more. We must then carry the question further, and ask, why should settlers pay 12s, per acre to the Canada Northwest Land Company, or even a net 5s. per acre to the Canadian Pacific Railway Company, when they can have land from the Government 'free gratis for nothing?'"

In answer to this we say—1. That the Canada Pacific Railway lands that are offered are subject to conditions of settlement, and are, therefore, not available for the purpose of speculation, but only of settlement. 2. That the Government have only the even section which are all taken up near any railway, and the settler does not get

which are all taken up near any railway, and the settler does not get any title until he has been on three years. 3. That the town sites are formed by the railway, as they run a railway wherever they please and make the town sites. 4. That the North-west Land Com-pany owns half of all the town sites. 5. That the land in Southern Manitoba on the line of fourth, second, and fifth townships is perfectly magnificent and that the great bulk of it helongs to the perfectly magnificent, and that the great bulk of it belongs to the

anada North-west Land Company.
These are some of the considerations that should answer the questions. In addition to these, however, answer why the Hudson's Bay Company's lands cannot be obtained for less than \$8 an acre in Southern Manitoba? Answer why the letters to England of all settlers that have been in the country are so full of lively hope? Answer whether a man in England could come to any part of the world, and can do what Mr. John White, of Morris, has done? He took up 320 acres of land about five years ago, he had little capital, he paid \$150 for the pre-emption; he has a farm to-day that is worth \$15,000, and his crop, last year when we were there, was calculated in June last to be worth \$5500. last to be worth \$5500.

What does the Canada North-west Land Company rest on? Is that the question? We answer with profound contempt for the ignorance of the writer in the London monetary authority it rests on he land of the North-west .- Toronto, Jan. 20. BOURNONITE.

THE GOLD FIELDS OF THE ISLAND OF ARUBA, DUTCH

WEST INDIES.

SIR,—The lucid description given by your able correspondent Mr. J. V. Smedley in last week's Mining Journal will no doubt be received by "Arquerite" and all others interested in Aruba gold fields as a "good omen for the immediate future." It is useless for me to as a good offen for the immediate tuture. It is useless for me to stiempt to go into all the details in relation thereto, not being thoroughly acquainted with the company's business from the commencement, but I think that after a residence of 15 months on the Island ment, but I think that after a residence of 15 months on the and mineral of Aruba, making a thorough examination of its mines and mineral resources, I am in a position to pen a few incontestable facts as to

the value of this property.

Aruba is an island about 30 miles long and seven miles wide, full of riches, containing no less than 250 discovered gold quarts veins of riches, containing no less than 250 discovered gold quarts veins of riches. great value and width. Such a rich group of mines I venture to state has not yet been met with in such an area in any other part of globe. The past failures of the company are, in my judg usively due to the absence upon the island of an efficient nical manager conversant with the science of gold mining in all its

A report has, I find, been in circulation—but for what motive it is not for me to suggest—that workings on the mines were stopped because the lodes became small or sterile—or, in other words, practically exhausted. This I emphatically deny, for every place I visited the deeper the workings were continued better results were obtained. For example, at the Children was a price a sheft. Children as a sheft of the continued of the c For example, at the Calabosa group of mines a shaft, California, had been sunk to a depth of 80 ft from surface, on a vein which never exceeded 20 in. in width, but which at times was very rich in free gold. The then manager reported that the vein in this shaft had run out, which was not the fact, being then 18 in. wide. Aftermaking a most minute and careful examination of the lode and the stratum in which it was a saws. stratum in which it was embedded, and from the encouraging assays I made of the vein matter, I was so favourably impressed that I decided to resume operations to prove the lode. I continued sinking this shaft until it reached 93ft. from surface, and can say, fearless of contradiction that the c contradiction, that the lode from the 80 to the present bottom (93 ft.)

became wider and richer every foot sunk, and is now fully $3\frac{1}{3}$ ft. wide, and will yield on an average 2 ozs. of gold per ton of stuff broken from the lode. I have reliable data that there are several mines in this section of the island which will yield $1\frac{1}{3}$ oz. of gold and upwards to the ton. There are many other parts of the property close to the 20-stamp mill where I proved that gold exists largely, and that the pay quartz apparently is inexhaustible, and looking at the large amount of capital already spent in fixing suitable machinery and exploring some of the mines, which will be found to be of great value to any sub-company.

If this property is energetically worked it cannot fail, in my opinion, to be a source of greater wealth to those who have now funds to invest in it; and I have no hesitation in stating, provided the mines on resuscitation are opened out in a proper and miner-like manner, they will compare favourably with any gold mines now being worked by British capitalists. There are at least 4000 tons of tailings existing upon the island, and awaiting treatment with concentration machinery which has already been erected for that purpose. became wider and richer every foot sunk, and is now fully 31 ft.

tration machinery which has already been erected for that purpose. These tailings will leave a profit of several thousands of pounds after concentration and consignment to England. This I have proved to be the case from experimental tests I made of 10 tons and upwards. be the case in many appearance of the control and appearance of th to the ton. All requisite plant, machinery, and stores are now upon the island, the mines are already partially developed, and, therefore, a small amount of capital, speaking comparatively, is all, in my opinion, that is now required to resume mining operations under proper management, and to make the undertaking, as Mr. Smedley has justly observed, a brilliant success.

J. Jewell, C.M.E. M.M.S. Stoke Newington, Feb. 21.

ARUBA ISLAND GOLD FIELDS.

SIR,-It is refreshing to read the letter from Mr. J. V. Smedley SIR,—It is refreshing to read the letter from Mr. J. V. Smedley in to-day's Supplement of the Mining Journal on the above gold fields, and I beg to tender him my thanks for his giving such a glowing and, I believe, truthful description of our property. It is very cheering to learn from his letter that the directors are alive to the fact that we possess a property second to none, and that shortly we may expect to hear that operations are resumed, I hope, on an extensive scale. Soon after I feel sure we shall recoup our past losses. Several shareholders concur in the opinion had the notices when issued for general or other meetings contained fully the exact requirements, after hearing a competent mining engineer had been when issued for general or other meetings contained fully the exact requirements, after hearing a competent mining engineer had been sent out to Aruba, and whose report corroborates that made by Mr. Frank Taylor, of Messrs. John Taylor and Sons, undoubtedly many shareholders would have felt pleasure in attending these meetings, and the small amount of capital now required would be forthcoming without much delay, for it has been a 'well-known fact for many years that the Aruba Island is very rich in gold.

It is gratifying to find a director of such experience as Mr. Smedley drawing attention to the folly of engaging engineers of theory instead of practice, which have resulted in so many failures in home and foreign mining. Now, Sir, the question may be asked who are the best men to be trusted with the general superintendence of a mine? Who but those who are naturally and socially prominent

a mine? Who but those who are naturally and socially prominent by reason of their correct business principles and experienced in all branches of mining? And in filling all such appointments directors should seek the best man, asking concerning him only whether he is honest, capable, and the best man for the place. I, for one, hope all energy will be displayed in forming this sub-company, and that the services of a competent man may be engaged to go out as superintending engineer. When others come forward with their share of the necessary capital, I will not be found wanting. I thank Mr. Smedley for the general information contained in his letter.

London, Feb. 17.

THE GOLD AND DIAMOND FIELDS OF SOUTH AFRICA. SIR,-In my last letter I said that it was generally expected that Mr. Bottomly, a Central Company director, would be elected to the only vacant seat at the Mining Board, but such is not the case. The conspiracy has been too strong for them, and the Great Central Company, which really means the Kimberley Mine, is not represented at the Mining Board; thus the interests of a company which is the one redeeming feature of the diamond fields are placed at the tender mercy of the owners of absolutely worthless ground. The Government are to a great extent responsible for this state of affairs, for it must be patent to every impartial person that for a long time—as far as the diamond fields are concerned—they have been legislating for the benefit of a very small clique at the express of the colory far as the diamond fields are concerned—they have been legislating for the benefit of a very small clique at the expense of the colony. The present Mining Board represents reef and rowdyism, whereas the Central Company represents diamonds and dividends. In order that justice be done to all parties it is quite time that the Government stepped in and sent the Mining Board to the rightabout, and allow every company to work on its own merits. As I anticipated, the first move after what some call the conspiracy election is to try and force on amalgamation, or, in other words, those persons who own ground that will not pay to wash are trying to get hold of the Central dividends. It seems impossible for the Central Company to amalgamate with any but the French Company; they would have everything to lose and nothing to gain. It costs 20s. per load to return the diamonds in the Kimberley Mine, and all the western ground is so poor that it will not average 7s. per load. Such an ground is so poor that it will not average 7s. per load. Such an incubus would cripple even the Central Company. Again it is difficult to see how they can amalgamate with the companies around them, although the ground at present may be as rich as their own, because it is well known that the containing rock of the diamond formation inclines towards the centre. It is, therefore, not difficult to determine the point at which the reef claims will be entirely out the whole the containing the containin

out, while the Central claims will continue down as long as there is an ounce of diamond soil in the formation.

The Government of this country have shown itself utterly incompetent to deal with the natural products of the country. They can boast of possessing the richest copper mine in the known world, and yet it might as well be in China for any benefit that it is to the Cape Colony. They possess diamond mines so rich that no other country in the world can compete with them, and yet the Government at present derive little or no benefit from them, and the large enter-prising repolution of the diamond field are being gradually driven. prising population of the diamond fields are being gradually driven from the colony—the result only of legislating for a clique. If the Government were to place a sufficient export duty on uncut diamonds we should soon have the benefit of a large diamond cutting industry in our midst. What is the use of a country possessing valuable products if its legislators do not know how to turn them to profitable account? If any other people than the Anglo-Dutch colonists owned these diamond mines they would long ere this have had a line of railway from Cape Town to the Vaai River. Fuel would have been introduced into this place at less than one quarter of its present which we have described by the control of the present which we have described by the control of the present which we have described by the control of the present which we have described by the control of the present which we have described by the control of the present which we have described by the control of the present which we have described by the control of the present which we have the present which we h sent price. The large deposits of hematite known to exist near the coal deposits would have been developed and manufactured on the spot, and a network of railroads would have shot out from this great centre of riches. Surely it is more to the interest of our Government to foster a powerful and enterprising population than to create a monopoly for the benefit of a few individuals. However, it seems to me doubtful whether they will be able to create a monopoly by amalgamating all the companies, because diamonds have been found in so many places, so widely distant from each other, that there is every probability of other mines being opened equally as good as the Kimberley, and as there is nothing at present to prevent persons from searching such a discovery may take place at any moment. In fact it is highly probable that such will be the case.

With regard to illicit diamond buying it is said that even now all the best diamonds find their way to Europe clandestinely. This is not to be wondered at seeing that the wealthy illicit diamond dealer is protected in every way, while the poor wretch who is driven to it through sheer starvation has to suffer for his dastardly employer. At Dutoitspan and Bultfontein there is very little life in the mines. This is not to be wondered at seeing the way in which the struggling companies are handicapped. Notwithstanding the brilliant prospects of the Saint Augustines Mine nothing is being done to develope it. Perhaps it is just as well in the present state of the diamond market, because such a very large additional supply of diamonds to be thrown on the market at the present time might

ossibly cause a glut. Everything at De Beers Mine is much as usual; the profitable and Everything at De Beers Mine is much as usual; the profitable and unprofitable companies maintain their respective positions. Kamfersdam does not appear to be a profitable mine as yet, although there is frequently a report of diamonds being found. Koffyfontein is spoken very highly of, and most practical men believe it will eventually turn out as good a mine as any in Griqualand. Jagersfontein Mine is improving. I hear that some of the companies are doing fairly well, and earning dividends. A report has just come in that the Central Jagersfontein Company have found a very valuable diamond. There are various reports as to its value ranging from 5000% to 20,000%. 50007, to 20,0007.

the Transvaal the killing of blacks goes on as lively as ever, In the Transvaal the killing of blacks goes on as lively as ever, and the whole country is spoken of as highly sanguiferous. The greatest enemies to the blacks are those fellows who came out as missionaries a few years ago, and who have turned traitors to the cause they piously promised to protect. Those canting hypocrites have not only turned traitors to their religion, but also to their country, and for a concession of other men's rights are prepared to connive at every iniquity, even to the massacre of British troops. The Transvaal is no place for an Englishman at present, for not-withstanding such an important personage as the British Resident, neither his person or property is worth a day's purchase. The accounts from the gold fields are not so encouraging this week. They are finding some good samples from the leaders at Waterfall, but only from the claims of Davis and White. I notice that some writers still continue to speak of placers; they exist only in their own still continue to speak of placers; they exist only in their own imagination. The general outlook here at the present time is certainly not bright.—Kimberley, Jan. 18. CORRESPONDENT.

P.S.—Since writing the above the application of the Central Company to upset the late Mining Board election has been dismissed, and Mr. Bottomly has been elected a member.—C.

AKANKOO MINING COMPANY.

SIR—The general meeting of this company was held on Dec. 14, and from the report I make an extract to which I would particularly ask attention. Mr. Lane, our manager, stated, in reply to a question, that the two stones he had picked up at random had not been assayed but simply crushed and washed, and the result he estimated at 10 ozs. and 60 ozs. to the ton. He also stated, and I quote his words from the report—"I could have brought many tons," &c.; and further—"I could have brought over rock which would have assayed very much higher than that." Referring to the works at the mine he said—"According to the last letter I received it is expected that about six weeks would finish the tramroad from the river bank to the mine," so that the tramroad has probably now been finished several weeks. I learned last week from the Mining Journal that the vessel with the machinery and additional hands had sailed; all that there appears now to be done is to erect the mill and crushing may commence at once, at least on the rock referred to by Mr. Lane, may commence at once, at least on the rock referred to by Mr. Lane, so that in addition to the undoubted richness of the quartz, as proved by actual crushing and washing, and not merely by assay, we should consider the advanced state of the works and the fact that a few consider the advanced state of the works and the the weeks must dissipate the uncertainty now prevailing.

EXPECTANS.

INDIAN KINGSTON MINING COMPANY.

SIR,-I quite expected some one more able than myself would have taken up Mr. Greenway's suggestion of Jan. 9 for a committee of shareholders to enquire into the history of the above company. I, as a shareholder, shall be happy to do anything in my power towards the carrying out of his suggestion, which I think could be made beneficial to the shareholders. If need be I will subscribe one-tenth part of my holding towards the object.

O. S. Tipton, Feb. 21.

CHERAMBADI MINE.

SIR,—I unfortunately was allotted shares in this adventure, which was registered on June 20, 1880. The prospectus was of the usual attractive description, encouraging the shareholders to expect a return of 80½ per cent, and the directors included an honourable, a baronet, a major-general, and a colonel. Appended to the prospectus was a report by Mr. Henry Tapp, the well-known mining engineer, who says, inter alia—" From quartz taken at a depth of 15 ft., and in which no gold was visible, I easily obtained 2 ozs. to the ton;" and he concludes his report by saving—"I beg to record the very high in which no gold was visible, I easily obtained 2 ozs. to the ton;" and he concludes his report by saying—"I beg to record the very high opinion I entertain of this mine; indeed, during a long experience of gold mining, both in India and other countries, I have not seen such sterling indications of gold near the surface, combined with the exceptionally rich quality of quartz obtainable at a moderate depth; and I say with confidence that, with fairly prudent management, investors herein will certainly reap a rich harvest." In due time—about 12 months ago, I believe—the company went into liquidation, but of the result the shareholders are still in absolute ignorance. Seeing that the company had scarcely got beyond the allotment of shares, I think it simply disgraceful that the liquidation has not been brought to a close.

PANDI RIVER GOLD WASHING COMPANY.

Cherambadi having collapsed, the shareholders were invited to transfer their interests to the above adventure, as to which Professor Vazie Simons is reported to have said that he had "found in the property three reefs, and that there might be four;" while Mr. N. Phillips,

perty three reefs, and that there might be four;" while Mr. N. Phillips, now managing director of Pandi River, says (see Journal of Feb. 25, 1881) "there is not a single reef on the estato." My conviction is that we have been "cozened" by all concerned in the promotion of the two companies, and I hope the shareholders in London may be incited by this letter to take action for the general behoof. I shall be yield to contribute towards the expense of such proceedings as may be glad to contribute towards the expense of such proceedings as may be resolved on .- Feb. 19.

BRITISH ENTERPRISE IN BRAZIL.

SIR,—Under the above heading in your valuable Journal of Feb. 17, a correspondent signing himself "Investigated" has endeavoured to give the celebrated St. John del Rey Mine a sly stab. He has tried it before, and he may try it again. He will not be able to injure that grand old property, which has ever been notorious for giving its detractors the lie. In the history of mining no mine has ever had more inveterate enemies than the St. John del Rey, and no mine has ever paid the English shareholders such splendid dividends. Not content with merely writing against the property, its mine has ever paid the English shareholders such splendid dividends. Not content with merely writing against the property, its worst enemies have even resorted to incendiarism, and in 1867 it was maliciously set on fire. When the props which supported the mine were burnt out the whole mine collapsed, and then there was rejoicing in the enemies camp; but this did not disconcert the directors of the St. John del Rey, who proved themselves quite equal to the occasion. They moved away from the old workings altogether, and proceeded to recover their mine by sinking two vertical shafts. During the time this dead work was progressing scarcely a week passed but what some kind friend—solicitous for the welfare of the public—called attention to the fact that the mine was played out. passed but what some kind triend—solutions for the weitare of the public—called attention to the fact that the mine was played out, could never again pay, the shafts were in the wrong place, &c.—to all of which the directors very wisely paid no more attention than if "Investigated" had been whistling jigs to a mile-post; and in 1873, after six weary years, they came down on the lode just as they expected; and, without even a consideration for the feelings of the ompany's detractors, they had the temerity to declare regular dividends of from 40 per cent, to 50 per cent, per annum. In 1867 the St. John del Rey suffered through fire; in 1882 they suffered from an excess of water, which is sometimes an equally destructive element, but the directors have again proved themselves equal to the occasion. The water is again out of the bottom of the mine, and from the report which appeared in last week's Journal, they sunk the sump last month 7 ft. I defy "Investigated" to point out another single gold mine in the world at the present time presenting such a favourable report as the St. John del Rey, which appeared in the Journal of last Saturday. There are five stores, varying from 50 to Journal of last Saturday. There are five stopes, varying from 50 to 100 ft. broad, with a leader of the rich mineral—from which they obtained their former dividends—averaging fully 30 ft. broad, equal to about 15 ordinary lodes concentrated in one. If "Investigated"

heap dress But to do least erect be at lieve lead-ditui

he le

factor Mean 24 he the ding I in all of st work this In the mach later men and Mr.

believed he for mac Min

caps chin mine from I min whice List writ the

East favo real Mr. will

tain dubi that with mac the luci

in the Minnth Mi

proodep som a fe sols and divi com amount the the sols and the the sols and the sol

wants to buy shares in the St. John del Rey he had better do so at once, as I do not think they will go down any lower. With regard to making enquiries in Brazil, the value of the information will depend entirely from whom it is obtained. "Investigated" is slow to believe that investors are so verdant as to believe that a mine must be good because some other mine near by has been good. Clever! Does he not think a person would be equally green to suppose that a locality from which over 100,000,000? sterling worth of gold has been scraped off the surface contains only one payable mine. The letter of "Investigated" is ill-timed, splenetic, and illogical. Men do not expect to gather grapes off thorns, or figs off thistles any more now than they did a long time ago; and when experienced persons are in search of either copper, tin, lead, silver, or gold, they naturally wants to buy shares in the St. John del Rey he had better do so at now than they did a long time ago; and when experienced persons are in search of either copper, tin, lead, silver, or gold, they naturally resort to the respective localities most congenial to their production. If "Investigated" is interested in gold mining I would advise him to accept the advice of Mr. Thomas Cornish, M.E., as set forth in last week's Journal—"to invest in well proved and developed mining districts in preference to the will-o'-the-wisp concerns in unknown and inhospitable places." I agree with "Investigated" that the Morro Velho Mine has done splendidly, and that it cannot last for ever. But I say that notwithstanding the many millions of pounds sterling worth of gold raised by the St. John del Rey Company, the Morro Velho Mine will be paying dividends long after "Investigated" and myself are past praying for. Every person acquainted with Brazil knows that the transport difficulty has hitherto been a serious check to mining enterprise in the rich province of Minas Geraes; but now that the railway is being pushed so rapidly into the interior it cannot fail to have a very beneficial effect, and I doubt interior it cannot fail to have a very beneficial effect, and I doubt not the time is not far distant when we shall see several other mines paying dividends equal to the St. John del Rey. At any rate, such is the opinion of—

Baker-street*, Feb. 19.

VIGILANCE.**

CALLAO BIS, AND ITS PROGRESS.

SIR,—The Journal of last Saturday contains interesting letters from Mr. Downes re the Callao Bis Mine, and the query he raises respecting non-confirmation of the telegram received by Mr. Nicholson deserves every attention. On Dec. 20 we hear of a telegram stating the Callao lode was cut, and on Jan. 16 following a congratulatory circular from the directors to the same effect, but not a word from Mr. Nicholson since the middle of December last year. Word from Mr. Nicholson since the inflatte of December last year. Is it possible that for two months the directors have had no communication whatever from their manager in charge of the mine? If on the contrary Mr. Nicholson has written the shareholders have a right to know what he says.

R. S.

CALLAO BIS GOLD MINING COMPANY-No. V.

SIR,-In further reference to this company's affairs, and to my etter published in last Saturday's Journal, no additional informa-tion has been received from the directors by the shareholders touch-ing the discovery of the Callao vein. I mentioned that I had received a letter from Guayana upon the subject, the text of which runs as follows: "It is now some days that Kitchen and the Chili people are saying that they have struck a lode in the No. 1 shaft of Callao are saying that they have struck a lode in the No. 1 shart of carrao Bis. I believe it is no lode, but they affirm it is one, though not the Callao Company's lode. No gold has shown in the stones, which are more or less what you saw before leaving, a bluish stone with white stripes, and full of sulphurets. To judge from the letter of "Inquirer," similar rumours seem to have reached his ears, and he apparently gives credence to them, as he says: "And the harry to find the Callao lade has in this instance again proved delugive." find the Callao lode has in this instance again proved delusive." I confess that I am carried away by no such adverse opinions, and feel convinced that the lode which has been discovered is no other than the Callao vein. A rose by any other name will swell as sweet, and ti is of little practical utility to discuss whether it be or be not the so-called Callao vein. By the reports from Mr. Nicholson we learn that a vein of quartz 4 ft thick has been found, and the results of assays of this rock gave over 5 ozs. of gold per ton. Such was the wording of Mr. Nicholson's cablegram from Trinidad, confirmed subwording of Mr. Nicholson's cablegram from Trinidad, confirmed subsequently by letter. This has not been in any way contradicted by the directors, though their continued silence on the subject, taken in conjunction with the rumours afloat, and letters from Venezuela, leads to grave doubts in the minds of many. It is clear then, I feel all will admit, that a vein has been cut, and one of no small promise. It will necessarily take some time to open up the vein, and it is fair to assume, at the rate at which the Callao Bis works are at present being carried on, that 12 months must clapse before any material results can be obtained. Still there can be little doubt but that there is a great future for this mine, and even if the rock pays 1½ oz only per ton in the mill, the company ought to be in the Dividend only per ton in the mill, the company ought to be in the Dividend List by this time next year, notwithstanding its capital of 180,000Z.

C. CAMPBELL DOWNES, A.M.Inst.C. E.

Late Resident Engineer and Manager in Venezulea of the Callao Bis Gold Mining Company.

THE NEW CALLAO COMPANY.

SIR,—Seeing that our general meeting was so close at hand, as your correspondent, "A Shareholder," admits, I cannot help thinking that he has shown a want of judgment in burdening your columns with queries which could have been more fully answered if addressed to the Chairman, with a request for a public reply. Our engineer explained so thoroughly, at the general meeting held on June 22 last, the position of matters with regard to the Robotham lode that it was not thought necessary to refer to it again in the report just issued. However, for the benefit of your correspondent I may be allowed to say, briefly, that a heavily timbered shaft has been sunk down on to the lode, but that an unexpected slight influx of water has prevented extensive operations in the absence of pumping

apparatus.
When Mr. Skertchly, our engineer, returned to England to answer When Mr. Skertchly, our engineer, returned to England to answer the absurd statements in the petition, he brought with him some pleces of the cap of the lode, which he had managed to secure by keeping the water under by constant baling. But, as this method of draining the shaft entailed a heavy expense, he left orders that it should be well secured, and nothing further done until a pump was sent out. This, with crushing machinery is now on its way, and within a few months we shall again resume operations on the Roman and the statement of the st within a few months we shall again resume operations on the Robotham lode. The pieces received from Mr. Skertchly have been analysed in London, and yield at the rate of from 5 to 6 ozs. of gold

The remarks of "A Shareholder," with regard to the fees received by the retiring directors, are easily answered by a reference to the balance-sheet, where the whole amount of fees paid since the incor-poration of the company is given. The expenditure at the mine was purposely, and with the consent of the auditor, lumped under one head, because, until Mr. Skertchly returns to Bolivar, it is impos-sible to separate it with sufficient securety. There is very little sible to separate it with sufficient accuracy. There is very little doubt that the amount we claim as an overcharge will be allowed to us; it is simply a question of account between our Bolivar agent and ourselves. The manager's expenses in connection with the petition have not been charged in the balance-sheet, as, we are advised, we shall receive them from the petitioner.

we shall receive them from the petitioner.

The report, for which 120l. was paid, is that given to us by Mr. Nicholson, a gentleman of the highest position as a geologist and mining engineer, and the present manager of the Chile Mine. Mr. Nicholson had been shown over the whole of our property by the Nicholson had been shown over the whole of our property by the late Capt. Robotham, the discoverer, and learning shortly after his arrival in England that a company had been formed to work it, he not only gave us a report, but attended and addressed the statutory meeting of shareholders. Your correspondent must have a very faint notion of the geographical position of Venezuela if he imagines that an eminent man will go there, make a report, and return to England for anything like 1201. The travelling expenses alone would exceed that sum. I can assure a "Shareholder" that it is no little satisfaction to me that I, who have hitherto regarded myself as particularly unfortunate in my bargain with the company, should as particularly unfortunate in my bargain with the company, should have actually excited his envy. A "Shareholder" is welcome to have actually excited his envy. A "Shareholder" is welcome to my position; but it is perhaps only fair, before inveigling him all the way from Leith, to offer him a copy of my profit and loss ac-count. He will there find, without now going into the details, that count. He will there find, without now going into the details, the total net amount received by me from the New Callao amo

to the "good thing of 50% since August, 1881. But I have implicit faith in the success of the company, and I feel assured that in the future it will prove not only a "good thing" for me, but for every shareholder in it. The item under the head of "expenses at meetings" refers to general meetings, and the larger part of it is chargeable to the petition. Office furniture has, I perceive, not escaped the thrifty eye of a "Shareholder," but if from the total he will deduct 20% for a safe, 10% for gas fixtures and fitting, 6% 6s. for a map, 5% for a sean, 5% for a counter, cupboard, and shelves, and 10% for kamptulicon and office sundries, he will find little left for luxuries. 1579 shares have been already forfeited for non-payment of calls, and the holders of the remainder in arrear have been allowed and the holders of the remainder in arrear have been allowed further time, only on condition that the balance outstanding be rapidly and regularly reduced. This is being don 3, and we have received a good sum since the issue of the balance-sheet.

London, Feb. 21 F. J. WARNER, Secretary.

NEW CALLAO MINE.

SIR,—"A Shareholder" has done good service to his brethren by the letter which appeared in last week's Journal; but I think he might have invited answers to the enquiries, "Why did four of the original directors resign?" and "Why should a director, who is largely in arrear of calls, have been elected to the office of managing director?" The idea suggests itself that a gentleman who has failed to manage his own affairs judiciously is not likely to manage successfully the affairs of a common is not likely the affairs of a common is not likely to manage successfully the affairs of a common is not likely the affairs o to manage his own affairs judiciously is not likely to manage successfully the affairs of a company. Moreover, military men are notoriously ill-fitted for the management of any business of a commercial description. "Shareholder" very justly and naturally remarks on the absence of all reference in the report to the working of the Robotham lode. According to Mr. Robotham the lode which bears his name produced 2 ozs. of gold per ton of quarts, and he "rested content" with that result. Why, then, not work this lode vigorously, and let the Pinnelly stand in the meantime? It appears to me that there has been a great amount of irregularity in the floating and management of the mine, and that a strict investigation would produce startling revelations. The company has not yet been two years in existence, three of the four original directors have resigned, and yet the accounts show a sum of 625% paid for directors' resigned, and yet the accounts show a sum of 625t. paid for directors' fees! The accounts are most unsatisfactory, and I hope the share-holders will insist on a special meeting being called to elicit details of the monstrous item of 1223t. 10s. under the head "salary and expenses of manager." I trust this subject will be followed up by some one who has a larger interest than—

Eth 91

ANOTHER SHAPPHOLDER ANOTHER SHAREHOLDER

WEST CALLAO COMPANY

-The letter of "Inquirer" in last week's Journal, referring to the West Callao directors and myself, appears to have been written by some one who is entirely ignorant of the law of supply and de-mand, and who has never taken the trouble to read the prospectus of the company. Referring to his remarks as to how the new railway, 100 miles from our property, will be of any use to us, I beg to state that when that railway is completed it will set free all the wa zons and carts now employed in conveying stores to the Caratal district. These will then require remunerative employment, and the competition among them must result in our getting our goods up at a very much lower rate than at present. The supply of carts will be much in excess of the demand for their services. In addition to this reduction of freight—as the means of transit to the Caratal mines will be materially cheapened and immeasurably facilitated—there will be a considerable influx of miners, and thus the rate of wages will be lower. In this, too, we shall participate. Next, the West Callao property is not on the north of the River Orinoco, unless that river has changed its bed since I left the country, so here again of the company. Referring to his remarks as to how the new rail-"Inquirer" is in error. If he had enquired at the office of the company instead of rushing into print it would have saved valuable space ur columns J. A. SKERTCHLY. Grand Hotel, Paris, Feb. 20.

GOLD HILL MINES.

SIR,—It is with much pleasure that I have to inform you of the receipt of a telegram from Capt. Treloar, our manager, to the effect that a very rich vein has been cut. In one of my despatches while

that a very rich vein has been cut. In one of my despatches while at the mines I wrote:—

At the South shaft, via A on the section, the old miners, Prim and Rouse, say—"At about 100 ft. from surface the middle vein is intact from this point westward." This they had kept quiet until lately in the hope they might get the place for 12 months on tribute; finding there is no chance of this, they have given a full explanation of the place. They say the middle vein at this point is rich, very rich, and that they know it. Prim also told Mr. Holmes that they had hoped to get it on tribute, and had calculated upon taking out 17,000 dwts. or 18,000 dwts. of gold from there.

Now it is were satisfactory to find by Capt. Treloar's telegram that

18,000 dwts. of gold from there. Now it is very satisfactory to find by Capt. Treloar's telegram that my faith in these two miners has not been misplaced. This only confirms my own opinion and the opinion of our manager that we have a most valuable property.

W. M. COCHRANE, Chairman.

Palmerston Buildings, Feb. 21.

CHILE GOLD MINE.

SIR,—In last week's Journal "Aurum" writes what he supposes to be a crumb of comfort to the shareholders in the Chile Gold Mine that 66,0001. of gold was extracted last year, but I may state that during the past five years nearly half a million has been extracted without the shareholders receiving 1d. of dividend. On enquiring from the secretary what has become of the last year's receipts I was informed they had all been used for opening up the mine, and that good results were now hoped for. This is but poor comfort. What causes such an enormous expense in this mine? nch an enormous expense in this mine

Ulster, Feb. 19. A LONG SHAREHOLDER.

NOUVEAU MONDE COMPANY.

Sir, -As many of your readers may be shareholders in the above hitherto unfortunate company, it may perhaps interest them to know that the writer has been informed on good authority that the works at the Nacupai Mine in Venezuela are now being carried on, and that had it not been for an unfortunate accident to the pumps, necessitating the sending of some fresh machinery from England, it is probable the crushing and production of gold would have already commenced. It is believed that a general meeting of the company will seen he held when the greaty will fully report on the present commenced. It is believed that a general meeting of the company will soon be held when the gerant will fully report on the present position of the company. It seems that the gerant not being able by an appeal to the shareholders to get sufficient capital to complete the purchase of the property, it was purchased by a syndicate, in which the Nouveau Monde Company has one-third interest. There seems to be no doubt about the great value of the property. Shareholders should therefore pick up heart and hope for the best. Knaresboro'. Feb. 19. Knaresboro', Feb. 19.

KAPANGA GOLD MINE.

SIR,-With your kind permission, I wish to state a few facts concerning this mine which are not generally known. It has been a favourite when not so extensive as it is now, having lately acquired two important additions—the Golden Point and Empress Mine—and when much further from the desired goal than at present. A great deal of time, money, and skill have been expended upon it under the direction of a well known, trustworthy, and experienced Cornish captain. The time of trial seems over, the time of reward at hand. captain. The time of trial seems over, the time of reward at hand. Some of the points that have been sought are already reached, others are being rapidly approached. The former have yielded since April last between 500 and 600 tons of quartz, producing 1708 ozs. of gold, equal to about 5000£, which, for the 12 months, will be over 6000£. The points that will soon be reached will enhance the return still further. The average produce is over 3 ozs. per ton, sometimes 4 ozs., and the specimens give 2 and 3 ozs. to 1 lb. of quarts. Machinery for the treatment of the pyrites is on the way to the mine. The pyrites yields, as per assay by Messrs. Johnson and Matthey, 6.75 ozs. per ton. This is a satisfactory state so far, but when the return from and the specimens give 2 and 3 ozs. to 1 lb. of quarts. Machinery for the treatment of the pyrites is on the way to the mine. The pyrites yields, as per assay by Messrs. Johnson and Matthey, 6.75 ozs. per ton. This is a satisfactory state so far, but when the return from the pyrites and tailings, which gives nearly § oz. per ton, and from the other portions of the mine which will soon be worked are added, it will be much more satisfactory still. One of these portions—the Coromandel shoot, soon to be worked—formerly returned 4000 ozs.

Has sent down the same man that worked this identical machinery at old Bog with such successful results; but he could not get such the same man that worked this identical machinery at old Bog with such successful results; but he could not get such the value of the pyrites and tailings, which gives nearly § oz. per ton, and from the others, I would, Sir, with your permission, put a few questions to Mr. Green, the correct answering of which will throw still mand others, I would, Sir, with your permission, put a few questions to Mr. Green, the correct answering of which will throw still mand others, I would, Sir, with your permission, put a few questions to Mr. Green, the correct answering of which will throw still more light on the subject:—1st. How is it that this machinery, which, we are told, worked so successfully at the Old Bog waste

of gold. This mine, which has been rich, is rich now, and likely to be a great deal richer still, is selling for about 45,000%. I believe the be a great deal richer still, is selling for about 45,000%. I believe the time is not far distant when numbers will say respecting it, "It was a capital speculation; I am sorry I missed the chance.' London, Feb. 21.

BRITISH BURMAH SYNDICATE.

SIR,—Some time ago a favourable notice was made of the above syndicate in the *Mining Journal*, inaugurated to acquire certain concessions to mine for coal in the newly discovered coal regions of British Burmah, to the effect that "the Syndicate is certainly ushered who are acquainted with the East," &c.

As a shareholder, I learned from the secretary that Mr. Hugh

As a shareholder, I learned from the secretary that Mr. High Falvey, C.E., had been to Burmah and Madras most satisfactorily conducting the affairs of the syndicate, and was expected home some time ago, when the shareholders would be called together for a distribution of profits, &c. Now, however, to my dismay and astonishment letters addressed to the office of the syndicate are returned from the Dead Letter Office—"gone, no address," and the solicitor, whose name was associated with the undertaking on the prospectus, writes "that he has long since withdrawn from any official on." writes "that he has long since withdrawn from any official con-nection with the company." Could any of your readers throw any light on the matter? Where is Mr. Hugh Falvey or the secretary?

UNITED MEXICAN MINING COMPANY.

SIR,—Some few weeks ago I advised old shareholders like myself not to part with their holdings in this company. The following will speak for itself:—

Returns for week ending Jan. 6...... \$3029-95 Cutting for week ending Jan. 6
 Returns for week ending Jan. 13
 \$4966-53

 Cutting for week ending Jan. 13 (say)
 966-53

THE DERING ROCK-DRILL.

SIR,—In the Supplement to the Journal of Feb. 10, under the heading—Rock-Drills in Spain, I notice that the rate of progress in one heading in hard slate rock at La Reyna Mine with the Doring rock-drill is as much as 24 yards a week, and notwithstanding that rock-drill is as much as 24 yards a week, and notwithstanding that the price of coal consumed in compressing is 2*l*. a ton, the cost is actually less than what it would cost to drive by hand-labouranother refutation of the fallacy that high speed in driving levels is only attained at the expense of economy. The result, however, I admit is largely owing to the superiority of the drill and compressional states of the superiority of the drill and compressional states.

admit is largely owing to the superiority of the superiority and it largely owing at these mines with two Doering 3-in drills, and it affords me pleasure to add my testimony to their efficiency and excellence in every respect. In as hard a limestone heading as there is in this district we can drive at the rate of nine yards a week at a less cost even were we to use steam-power for compressing instead of water-power as we do, than by hand-labour. The drill is remarkable for its low consumption of air compared to its boring power, a fact of very great importance; and whilst it requires no skilful manipulation it enjoys a remarkable immunity from wear and tear. Mr. Doering was, I believe, the first Englishman to secure a patent for a percussive rock-drill, and the drill that he now supplies—the fruition of years of study and experiment—is, I think, as near perfection as it well can be. MATHEW FRANCIS.

The Rhudalun Mines, Rhydymmyn, Mold, Feb. 20. The Rhydalun Mines, Rhydymwyn, Mold, Feb. 20.

PIERREFITTE-GREEN'S MACHINERY.

PIERREFITTE—GREEN'S MACHINERY.

SIR,—Referring to one remark of Mr. Green's in his letter of the 27th ult., in which he writes—"but both myself and the (Pierrefitte) Company know the result of Mr. Rickard's plans, and have paid for the knowledge." Taking the figures of "Observer" as correct, and from what I hear is near the mark, do not the Shepherds Company know the result of Mr. Green's plans, and have they not paid for the knowledge also. As Mr. Green in his letter does not admit or deny the statement of Mr. Rickard, that his machines, with those of the same kind of machines as erected by Mr. Rickard at Pierrefitte, had been tested at the Van Mines, and so tested as resulted in favour of those as used by Mr. Rickard, and which are now in use at the Van Mines. Perhaps Mr. Green will be kind enough to tell us if this be true or not. If true, what are the defects in the machines erected by Mr. Rickard at Pierrefitte.

I could refer Mr. Green to some mines where large heaps of

I could refer Mr. Green to some mines where large heaps of skimpings have accumulated from shaft smalls, containing 20 lbs. to the ton, although having been previously dressed by hand; but it requires to be reduced to a very fine size before all the mineral can be extracted. It may be waiting further treatment, when I hope it will meet with better results than already shown. I have known it jicced by hand machines for 2s, ner ton. jigged by hand machines for 2s. per ton.

Liverpool, Feb 19. TRAVELLER.

OLD SHEPHERDS MINE-GREEN'S MACHINERY.

SIR .- In last Saturday's Journal I notice a letter from Mr. Green on the above subject, in which he asserts that "Indignant Shareholder" and "Observer" are woefully in the dark or are wilfully misleading others; and, in order to dispel our darkness, and disprove our so-called misleading statements, he gives us a series of questions to answer, by doing which he, no doubt, intends to avoid the main country of the property of the p to answer, by doing which he, no doubt, intends to avoid the main point at issue, and raise a discussion on a few firm points of technicality. In order, however, to throw as much light as possible on this, to him, dark and gloomy subject, I will endeavour to answer his questions to the best of my knowledge, and as concisely as possible.—1. If Mr. Green will refer to his letter of Jan. 27 ("Pierrefitte Mines and Green's Machinery"), published in the Mining Journal, he will find that he has himself, while writing of Pierrefitte Mine, referred to Old Shepherds in a not very complimentary manner, and stated that "the working of the burrows was not proving remunerative, though not through any defect in his machinery. Oh, no! "but because there was only 20 lbs. of lead per ton in the stuff treated, which would not pay if it was all extracted." It was this statement that drew forth my remarks, as with unenlightened people like myself it is generally understood that with proper dressing machinery a return of 11 lbs. of lead per ton of stuff treated will pay well in turning over mine burrows.—2. I cannot remember just now who told me, but I gather from Mr. Green's letter, and am willing to admit, that this machinery was designed for the working of the old admit, that this machinery was designed for the working of the old Bog Mine waste heaps.—3. I cannot tell. If Mr. Green has lost favour with the directors perhaps the secretary of the company would inform him.—4. In the first dressing the stuff was not reduced fine enough to get out all the lead. I am no advocate of hand dressing, but if the Shepherds machinery is a fair specimen of dressing, but if the Shepherds machinery is a fair specimen of Green's much-vaunted dressing machinery, then I say most emphatically that ore can be dressed cheaper by the ordinary methods of hand-dressing than by it, judging from the results before us.—5. This is a poser, and should be left for Mr. Green to answer; to assist him out of his difficulty, however, I would suggest that probably the Cornish air does not agree with his machinery, more especially as he has sent down the same man that worked this identical machinery at old Bog with such successful results: but he could not get such

heaps cannot do similar work at Shepherds; if it was suitable for dressing the waste heaps of our mine, surely it would do in another? But Mr. Green comes to the rescue, and states he never intended it to do anything at Old Shepherds but dress skimpings. To say the least this looks mysterious.—2nd. What was Mr. Green's idea in erecting skimping machinery at least 12 months before there could be any skimpings to dress? He will scarcely get the public to believe that Capt. Nancarrow (a gentleman who knows as much about lead-dressing as perhaps any other man) ever sanctioned the expenditure of 1000l. on skimping machinery under such circumstances.—3rd. If Shepherds machinery did all that Mr. Green promised, or all he led others to expect it would do, then why such complaints about it? Capt. Nancarrow's report in the Mining Journal, May 27, 1882: "We have a good supply of water for Green's machinery, which works day and night dressing halvans. . . It would be far more satisfactory if we could return double the quantity in the same time." Meaning in ordinary language the machinery was dressing 15 tons per 24 hours, against the expected, if not promised, 30 tons. Again, in the Journal of June 24, Capt. Nancarrow reports:—"Green's dressing machinery is now undergoing renovation, and will be complete in the bourt two days, when we hope it will dispatch a larger constitute. heaps cannot do similar work at Shepherds; if it was suitable for the Journal of June 24, Capt. Nancarrow reports:—"Green's dressing machinery is now undergoing renovation, and will be complete in about two days, when we hope it will dispatch a larger quantity of stuff. We are perfectly satisfied the halvans will pay well for working when the machinery is put in working order." Compare this with Mr. Green's assertion that the halvans will not pay to work. In the Journal of Sept. 2, Capt. Nancarrow again reports—"Green's machinery up to date has not dispatched the quantity of stuff calculated on, but we hope in a few days to be able to report an improvement. I am not aware, Sir, that this improvement ever was effected, and hence the great loss in dressing the waste heaps—a loss which

ment. I am not aware, Sir, that this improvement ever was effected, and hence the great loss in dressing the waste heaps—a loss which Mr. Green himself does not dispute.—4th. If Green's machinery was equal to all the requirements of the mine, &c., as he would have us believe, is it true that Mr. Green was requested to meet the consulting engineer and agents of the mine to arrange a compromise, whereby he forfeited a substantial amount of his contract price?

I must protest against Mr. Green's statement that his stamping machinery is quite equal to the present demand of Old Shepherds Mine, which I am pleased to say is in a very prosperous state, and capable of producing more orestuff in a day than the stamping machinery could dress in a week, but to meet the requirements of the mine a large Cornish crusher and other machinery is being erected from the plans, and under the supervision of the company's engineer. Imight mention I have no prejudice against Old Shepherds Mine, which I hope will soon enter, and long may grace, the Dividend List, nor against Mr. Green or his machinery. My only object in writing these letters is to lay what I believe to be actual facts before the readers of this Journal, and allow them to draw their own conclusions. What Mr. Green's machinery is doing elsewhere does not clusions. the readers of this Journal, and allow them to draw their own conclusions. What Mr. Green's machinery is doing elsewhere does not concern us; we want to know what it is doing at Old Shepherds or East Wheal Rose, and we hope in any future letters we may be favoured with from Mr. Green he will confine himself to this, the real point of discussion. Referring for a moment to the letter of Mr. Green's deputy, I can scarcely fancy such an intelligent mortal will be allowed to end his days around Aberystwith, there will certainly he an opening for him in the British Museum. Fancy him will be allowed to end his days around Aberystwith, there will certainly be an opening for him in the British Museum. Fancy him dabbing "Observer's" letter as "incomprehensible," and then stating that Mr. Green's machinery under his superintendence does so-and-so, without saying whether he has four or forty crushers or jigging-machines, what they out, what was the motive-power, or anything of the sort. His letter, Sir, can scarcely be accepted as a marvel of D. S. S. the sort. His letter lucidity.—Feb. 20.

MINERS' RIGHTS, AND MINELORDS.

SIR,—"Doctors differ" is an old saying, and I differ from many in their opinion relative to Mr. Basset and the adventurers of the Dolcoath Mine. From what I have heard and know of the Dolcoath

in their opinion relative to Mr. Basset and the adventurers of the Dolcoath Mine. From what I have heard and know of the Dolcoath Mine I think Mr. Basset deserves to be highly praised for insisting that a new shaft be sunk in this mine. Now when I see that a promoter of a mining company often gets several thousands of pounds for a mining set which has cost him nothing and often turns out worthless, I do not see why Mr. Basset should not have 40,000% or more for renewing the lease in question.

But there are two things Mr. Basset as a gentleman and as an honest man seems to have forgotten.—1. The lease having five more years to run the new lease should not expire until 26 years hence.

2 Mr. Basset should say to the adventurers—"You have made this ground by your industry and pluck into a most valuable property, therefore if you do not choose to pay the fine I demand, on the expiration of your lease we will not only have the materials valued, but the mine itself and whatever valuation he puts on the latter, I will pay to the adventurers." Let Mr. Basset act thus, and the adventurers choose not to pay the fine—the adventurers will work the mine fairly—Mr. Basset will in the end have a valuable property in his own possession, and the adventurers will be defrauded of nothing. In other words both parties will be or ought to be satisfied.

BEE-WORKING OF OLD MINES, &C.

RE-WORKING OF OLD MINES, &c.

SIR,—Of late there has been several old mines started in Cornwall that have been idle for many years, some of which have been very productive, and commenced to yield large quantities of ore at shallow depths. This was in certain districts, as all are not alike in this. In some districts the deposits are deeper down, and I will here mention a few mines that were found very rich at shallow depths—Par Consols commenced to be rich before they reached the 30 below surface, and continued rich for many years—in fact, paid 1000%, per month in dividends for over 20 years, and never made a call. Fower Consols dividends for over 20 years, and never made a call. Fowey Consols commenced rich just at the same depth, and paid just the same amount, some say more. Then there were the rich Crinnis—two or three of them west that paid, I believe, better than the latter mines, and continued to do so until they reached to about the 150 fms. below the surface, when a hard bar of ground was met with, and the lodes were found unproductive and the mines suspended, and not a foot were found unproductive and the mines suspended, and not a foot was ever sunk down in this bar of ground to prove the lodes below, to see if they would not be found productive as above the bar. My belief is that the lodes will be found equally as rich, if not richer. I am of opinion that the ore found above the hard bar of ground is the top or shallow deposit, and that a larger deposit is now below, and I find I am not alone in this opinion. The worth of minerals raised in this district has been over eight millions sterling, I am told. Then there were the celebrated Pembrook Mines, as rich if not richer than any of the mines in the neighbourhood, and will be found rich if they were re-opened again, in my opinion; but I do not advocate ground mentioned above, similar to the Camborne district, as the strata found at the bottom of the mines was completely altered. But I would rather, as far as I am concerned, open virgin ground in this rich district than the best of those mines, as minerals would be found at shallow depths, and instead of pumping out water tin and copper ore would be sent into the market. I know a mine now opening in the midst of these rich mines in which an adit level has been driven on a lode for 130 fms., and the lode will average from 4 to 7 ft. 7 ft. wide, and will yield from 50 to 70 lbs. of tin per ton of lodestuff at the adit, and, to use the Cornish phrase, a lane of tin is found going below the adit; this will be a great success. The adit now at the extreme eastern end is 25 fms. below the surface. It would be far better to open mines like this than fork out old sus-pended mines. Of this I am sure. Much has been said of late about open workings, or what is termed open-cuts, similar to railway out-tions. pended mines. I was the first man in Cornwall that advocated this mode of working, and at first had a great deal of prejudice, but when I proved it to be a success it went smooth enough. Now, from my experience I found if the stuff did not yield from 12 to 15 lbs. of tin per ton of stuff it would not pay for steam-power. I admit that if there is ample water power, and if it be worked on a small capital it may not be the stuff of the stuff it may pay, but not else at such a small yield of tin per ton of stuff.

By your permission I intend to write more on this subject for the Journal shortly, of places, dates, &c. I also intend to write an article on mines that have been lately started, old deep mines that have been idle for many years, and to point out the advantages that would be obtained by opening shallow mines in virgin ground in rich districts; of mines that have the stuff, and to show the benefit that would be derived by sending into the market ores for sale instead of pumping water for ever. I shall mention East Wheal Rose and Tresavean Old Mine. I have been at the bottom of the former many times at Michell's shaft, consequently know what will be found there when the bottom is reached. Remember, I am not at all against re-opening some of our old mines. I know some would pay well, but much depends upon the district in which the mines are situate. Old Polgooth, as we used to call it, is a good property. I think the mine is now called Polgooth United, and if they go north they will find it, and if they do not they have only to blame themselves. I know mines now making calls when they should be paying dividends, and positively in my opinion you have one in your Dividend List that ought not to be there, as it was never earned by profits.—Finsbury House, Roche, Cernwall.

Thos. Parkyn. fits .- Finsbury House, Roche, Cornwall. THOS. PARKYN

DOLCOATH MINE.

-We live in perilous times, because the conduct of Mr. Basset in acting on the advice of his agents has brought the Camborne in acting on the advice of his agents has brought the Camborne mining interest in the district into peril. The demand made by him of a premium for a renewal of the lease of Dolcoath is without precedent in this county. Wheal Vor was very rich when the lease granted to Messrs. Gundry expired. I believe that the profit at the time was about 4000l. per month, and yet Mr. Trelawny neither asked for a premium or for increased dues on renewal of the lease, and the dues were able about 18th, whereas the drawn Tolloath. asked for a premium or for increased dues on renewal of the lease, and the dues were only about 1-24th, whereas the dues at Dolcoath are 1-15th. When the Duke of Bedford renewed the lease of Devon Consols he charged no premium except for the grant of a large extension of limits on the course of the lodes which had given more than a million of profit. I find that at the interview with Mr. Basset last week he expressed to the committee his willingness to accept 1-12th dues instead of 1-15th, to commence from the present date, and to relinquish the demand of 40,000%. If I were a shareholder in Dolcoath I would attend the meeting of the company next week and vote against any increase of dues during the present lease, which expires in August, 1887. No one can foresee what four and a half years may bring about in the state of the mine; I therefore question the expediency of accepting a lease just now with an increase of the expediency of accepting a lease just now with an increase of royalty. I look upon the district as doomed. All the mines on the strike of Dolcoath lodes are worked at a loss—Carn Brea at a heavy loss. Cook's Kitchen, which was to have given dividends in 1881, has not done so since that prophecy was written in the *Mining Journal* in 1880.

The confidence of the investing public is much diminished by Mr. Basset's unreasonable demand, and the value of the mines consequently greatly reduced. A lord in the receipt of 9000l. per annum from a mine 400 fms. deep, in which he risked nothing, ought to be satisfied. He has about 20,000% per annum for dues only from mines in the Camborne district. The refusal of the lords to renew the lease of the Consolidated Mines, in Gwennap, in 1837, led to the ruin of that district. Up to that time it was the most productive district in Cornwall, now it is almost desolate and depopulated. Will the Camborne district be reduced to the same condition?

R. S.

SILVER NEAR CALLINGTON—GOOD NEWS FOR THE PRINCE OF WALES MINE AND THE ADJOINING MINE.

SIR,—Although the field containing the silver lode belonging to the Prince of Wales Mine is not very large, it is admirably situated, for this conclusive reason, because it lies between two rich courses of silver ore. The following extract will throw a good deal of light on its real value:—"There is no doubt that some 12 months since on its real value:—"There is no doubt that some 12 months since the representatives of the Prince of Wales Company pooh-poohed the existence of silver at the Queen (i.e., the adjoining mine) until 1000l. worth was raised in a few weeks by the Queen Company at a cost of a few pounds within 1 or 2 ft. of the boundary hedge dividing the two setts. However, the Prince had the tail end, and in following this one shoot of rich silver ore up to surface, which is going down as rich as ever, the Prince of Wales Company also managed to get some 1000l. worth." From this brief, but very clear statement, it is obvious to everyone that this rich shoot of silver ore, from which 2000l. worth has already been raised, can really be reached with a little trouble. As a proof that small setts are not to be despised, take the tiny mine called Trehane for an example. Well, the shares of this little mine (close to the now great Hony and Trehavny sett) take the tiny mine called Trehane for an example. Well, the shares of this little mine (close to the now great Hony and Trehawny sett) less than 40 years ago rose from 51. to 251. in a few months, and besides this it paid substantial dividends for a long period.—See Mining Journal, Vol. 1872, page 236.

OLD AMATEUR.

BWLCH CREOLAN LEAD MINE.

SIR,-Be so good as to afford me space in the Mining Journal to give your readers a little information concerning the above mine, but before entering into details I am glad to state that the projected railway from Oswestry to the mining district of Llangynog is now to be commenced; also that three or four mines in close proximity to the famous Old Llangynog Mine have in consequence commenced operations. The above mine is situated 1½ mile south-west of the Old Llangynog Mine. A company halling from Birmingham was operations. The above mine is structed in mine south-west of the Old Llangynog Mine. A company hailing from Birmingham was formed about 18 months ago to develope this valuable property, the capital being 72,000 shares of 1*l*. each; 60,000 fully paid shares were handed to the vendors in payment for the mine; 3000*l*. or 4000*l*, was handed to the vendors in payment for the mine; 3000l. or 4000l, was subscribed for working capital by the company, nearly all of which has been expended in making reservoirs, laying tramroads and inclines; also erecting buildings and machinery for treatment of the ores. The machinery, &c. was supplied by a Welsh gentleman, and with this the company was able to sell one parcel of ore before their finances became exhausted, which necessitated the suspension of all operations on the mine. The said Welsh gentleman at once filed a petition to wind the company up, which, suffice it to say, was a highly discreditable procedure, inasmuch as the company was considering the best means of raising funds to pay off the liabilities and of further developing the mine. However the Birmingham party ought not to have allowed the mine to drift, but to have rescued it, which would, no doubt, have been done if the mine contained black than any of the mines in the neighbourhood, and will be found rich if they were re-opened again, in my opinion; but I do not advocate the re-opening of some of the old abandoned mines, as they will be found poor, and will not pay their expenses. Some will pay and be found rich. I know every district in Cornwall, and know those mines that will pay and those that will not. In my 30 years' mining caperience I have seen many things under the sun. The management at the mines depends much as to the success of the mines. I believe that large quantities of tin will be found below the bar of ground mentioned above, similar to the Camborne district, as the which would, no doubt, have been done if the mine contained black for 5 ft, in width containing an intermixture of good lead ore. This is only about 20 fms. from surface, and no level under it, consequently it requires no complexionary remarks. The caunter lode has only been opened on the back of the lode, showing a beautiful matrix containing lead, which can be seen at any time. The late company did not spend 500%, in developing the lodes, all their time and money being chiefly expended in erecting machinery, &c.

The mine will be sold in a short time for what it will realise. It has all the characteristics and appliances for making it profitable.

The mine will be sold in a short time for what it will realise. It has all the characteristics and appliances for making it profitable. Bona fide investors will do well to watch a district which will have railway communication in a short time, and which has already paid millions in return for lead ore only. The district also abounds in all kinds of profitable produce, such as slates, slabs, granite, chinastone, and phosphate of lime. This latter mineral I hear is making a move in the neighbourhood.

Z. Llanrhaiadr, Feb. 19.

DETAILS OF MACHINERY.—Under this title a new volume of Weale's Rudimentary Series has just been issued by Messrs. Crosby Lockwood and Co., of Stationers' Hall-court, comprising instructions for the execution of various works in iron, in the fitting-shop, foundry, and boiler-yard, arranged expressly for the use of draughts-

men, students, and foremen engineers by Mr. Francis Campin, C.E. Whether the student or workman be engaged on pulleys, engines—steam, air, or gas—railway wheels, turntables, screw-cutting, parallel motions, or any other ordinary or miscellaneous work he will readily find the details he requires. That his volume may be equally acceptable to all classes Mr. Campin has very wisely adhered strictly to simple arithmetic throughout. The calculations, to judge from half-a-dozen promiscuous tests, are thoroughly accurate and reliable, and will be of inestimable value to those for whom the book is written; it is worthy of every commendation.

REPORT FROM CORNWALL.

Fcb. 22.—Our last week's caution to the shareholders in Dolcoath Fcb. 22.—Our last week's caution to the shareholders in Dolcoath not to expect too much from the interview of the deputation committee with Mr. Basset has certainly been amply approved. We take the particulars of conference as set forth by Mr. Bolden on behalf of Mr. Basset as the fullest justification of our doubts and fears. The official account is as follows:—

Mr. Basset having read the memorandum enclosed, marked A, Mr. Marriott read the statement of facts also enclosed, marked B. A very long and full discussion then took place. After more than one suggestion that Mr. Basset should consent to take a sum of money down had been rejected by him. the following minute was drawn up

suggestion that Mr. Basset should consent to take a sum of money down had been rejected by him, the following minute was drawn up by Mr. Bolitho on behalf of the deputation:—
"The deputation, after full discussion, proposed to recommend the shareholders to take a lease of 21 years from August, 1877, at 1-12th dues without altering the existing lease, whereby 1-15th would be payable during its continuance. Mr. Basset declined to accept this proposal, but was willing to accept 1-12th dues to commence at

be payable during its continuance. Mr. Basset declined to accept this proposal, but was willing to accept 1-12th dues to commence at once, unless the shareholders should prefer his former offer."

Mr. Marriott having demanded from the deputation what they proposed to do in order to disabuse the public mind of the notion that Mr. Basset was requiring a fine, on the suggestion of Mr. Marshall they determined to add to the above minute the following vides: rider

"The deputation further beg to call the attention of the share-holders to the terms of Mr. Basset's previous offer, and to beg that they will not consider or speak of these terms as the imposition of a fine. Mr. Basset is as strongly opposed to the principle of the imposition of a fine as can be any one of the adventurers of Dolcoath.

position of a fine as can be any one of the adventurers of Dolcoath.

"I have great pleasure in thus seeing you, gentlemen, at your own request on the subject of the renewal of Dolcoath, and, although nothing has been done in the matter without the most careful premeditation on my part, there certainly does appear to me to have been an altogether extraordinary misconception of the facts in the minds of the shareholders, which I hope the present interview may be the means of dispelling, and in furtherance of that object I will ask you to allow the proceedings to-day to commence by Mr. Marriott reading to you a brief statement of the facts which by my desire he has prepared—and although I hope in my state of health you will not expect me to enter into a personal discussion of details, which I, therefore, leave to Mr. Marriott and Mr. Bolden, I shall, of course, be ready to receive any representations you think desirable in your own interests, and I shall feel obliged by your drawing up a minute before you separate of what takes place to-day, for my benefit and guidance, if further proceedings in this negociation become necessary.

"There for observations I have read form a measured we in the state of the proceedings in the processing in

come necessary.

"These few observations I have read from a memorandum, in order that, with the minute I have asked you to supply me with there may be, as far as possible an exact record of all that transpires

here to-day.

"To avoid any unnecessary waste of your time I will now propose that Mr. Marriott shall read the statement I have referred to."

[MEMORANDUM B.]

The Polyting to the Proposed Renewal of Dol

"Statement of Facts Relating to the Proposed Renewal of Dol coath Lease.
"More than two years ago negociations were opened on behalf of the shareholders for a renewal of the sett, and a distinct intimation

was given that the payment of a fine would be one of the conditions of its being granted.

of its being granted.

"In the progress of the negociations the principle of a fine was conceded, and amounts varying from 10,000% to 25,000% were tentatively propounded to Mr. Basset's advisers, and much discussion took place as to the best mode of raising whatever capital might be required—whether by a call, or a fresh issue of shares, or by debentures.

Quite recently circumstances came to light which tended to make it desirable the question of renewal or non-renewal should, in the interest equally of the lord and the adventurers, speedily be determined; and, with the concurrence of Mr. Bolden, I recommended Mr. Baset to withdraw the stipulation of a fine, and substitute a larger participation of the produce as a main consideration for renewal.

"On this principle the leases of Dolcoath itself and many other."

"On this principle the leases of Dolcoath itself, and many other "On this principle the leases or Dolcoath itself, and many other mines in Cornwall, had again and again been renewed before; and, apart from the sanction of the practice, I felt it was a principle to which (unlike the principle of a fine) no reasonable objection could be made if the circumstances of the mine justified its appli-

"Those circumstances briefly are:—
"I. That, whether you consider them from the commencement, in
1846, or only from the commencement of the present lease, the mine
was developed, as it has been sustained, by the capital of the owner

was developed, as it has been sustained, by the capital of the owner and the produce of his soil, without the expenditure in either period of one penny, otherwise on the part of the adventurers.

"2. That in either period, and, therefore, in both, the adventurers have received considerably more than four times as much as the owner—the relative proportions during the present lease being 66,000, received in dues by the owner, as against 286,000, plus the value of the plant received by the shareholders; and the amount they divided last year alone was 37,000, which is considerably more than half what the owner has received during the whole currency of the lease.

the lease.

"On these data Mr. Basset made the proposal contained in Mr. Bolden's letter to the committee on Jan. 26.

"I deviate for a moment to ask whether a participation, not of the produce which is certain, but of the profit which is uncertain, to the extent of 40,000%, payable in instalments of 25 per cent. while the profits are made, but ceasing when they cease, can, without an utter perversion of language, be termed a 'fine of 40,000%.' The proof that it cannot I think lies in the fact that it was almost universally init cannot, I think, lies in the fact that it was almost universally in-terpreted to mean a cash payment of 40,000% supplied by the capital of the adventurers.

"Returning to the practical purpose of the present interview, I am desired by Mr. Basset to say that unless you can show the data here supplied are inaccurate he is unable to perceive for himself any r departing from the terms (subj to the n

reason for departing from the terms (subject to the modification of them communicated by Mr. Bolden on the 10th to the committee) he had previously communicated on Jan. 26.

"Having thus stated to you, gentlemen, what I believe to be the facts, and Mr. Basset's conclusions upon them, allow me to add that while 40,000%, under whatever limitations or through whatever medium it is paid, undoubtedly sounds a large amount; still, when calmly considered in any spirit of equity and common sense in relation to the facts surrounding the source from which it will, if paid at all, be derived, then under the conditions of limitation under which whoever is liable for it is protected, it shrinks into mere insignifi-cance when contrasted with the unquestionable market value of the property it secures; and in reply to all that has been said about Mr. sset's terms being destructive of confidence in himself and mining generally, I would appeal to any independent commercial authority to say whether (short of sacrificing his interest altogether) quite to say whether (short of sacringing his interest altogether) quite apart from the enormous profits received by the adventurers in the past, he could possibly establish a greater confidence in himself, or give greater encouragement to speculation generally than with such a prize almost within his grasp, surrendering it for 21 years on the terms proposed. Be this as it may, the responsibility of their acceptance or rejection rests, gentlemen, wholly with yourselves."

Now, the plain English of all this is simply that Mr. Basset con-

sharthe Gree Stoot 1; L of 1 (wh Kni Rav T 38,5 stea Tappoor T Comby situ each Roe C. I

Mor Bea Gib T 5000

Egr the simi

ding bers T in s cult dist

raise (who tisin T. R Tyne tures field

boar Shel five Sn in sh The Live Whi E, C

WAY To a ordi pany mon

sents to give up 40,000% fine in exchange for probably 50,000%, extra dues, and this is the "concession" with which the committee have to meet the adventurers at the adjourned meeting. Frankly, we have done our best to make out that anything has been gained, so nave done our best to make out that anything has been gained, so far, by the action taken; but, on the showing of Mr. Basset's own representatives, we have wholly failed. True, the word "fine" disappears, and, so far as that goes, a principle is established. But it is a principle that, Mr. Basset says, has never been assailed, while Mr. Marriott actually goes so far as to "demand" of the deputation—a strange word to use towards such a body of gentlemen—" what they proposed to do in order to disabase the public mind of the —astrange word to use towards such a body of gentlemen—"what they proposed to do in order to disabuse the public mind of the notion that Mr. Basset was requiring a fine." And this is actually the same Mr. Marriott who, a short time previously, had told that very deputation that more than two years ago the adventurers had been informed by Mr. Basset that "the payment of a fine would be one of the conditions" of a new lease being granted; and, moreover had stated to the deputation, unchallenged, that the principle of a fine had been "conceded" by the shareholders. In the face of all this, it was at the best mere "child's play" to call upon the deputation to plead with the shareholders not to "consider or speak of Mr. Basset's terms as the imposition of a fine; and some explanation seems required from the deputation as to how they came to agree to even the guarded form in which this opinion is expressed. One thing, indeed, is clear, that if Mr. Basset is "strongly opposed to the principle of the imposition of a fine" some of his representatives are not; and we also gather from the whole tone of the proceedings that, as we suspected, the action taken in Mr. Basset's name is less his action than that of his adviser or advisers.

So far as we can gather, there is really no chance of the adventions.

So far as we can gather, there is really no chance of the adventurers accepting the terms now propounded. The demand of 1-12th dues by itself might be accepted, bitterly as it would be resented, as the condition of a new lease; but, coupled with the forfeiture of the existing lease, the adventurers, even if they had the power, would be untrue to their own interests, and false to the welfare of the whole mining community, if they for one moment entertained the idea of such a surrender.

We shall need, to all appearance, a Miners' Defence Association, and a strenuous effort made to alter the land laws in relation to mining, if this industry is ever again to be placed on a secure basis.

The destruction of confidence seems fatally complete.

The result of the adjourned meeting is now being looked forward to more anxiously than ever, for upon it will turn the most momentous issues. What resistance may mean no one can exactly foresee, but it is tolerably evident what would be the effect of giving way. Already it has been more than hinted that sundry other mineral lords are inclined to follow the Tehidy lead. A wide restriction of mining operations, especially since the unfavourable reports of Carn Brea, Tincroft, and other mines, is highly probable in any event.

TRADE OF THE TYNE AND WEAR.

Feb 21.—The steam coal trade north of the Tyne has been extremely quiet during the past week, and many of the works have only been partially employed. This is in a great measure due to the extremely bad weather in the German Ocean. Prices have not, however, given way much, and the best steam coal is still kept up to late rates, but some second-class kinds can be got on easier terms. A large number of vessels have now arrived, and work at the North collieries will be more plentiful this week, and it is certain that the lower rates of late for some coal has brought a good many enquiries, from which business may ensue. The time is now close at hand for the opening of the Baltic ports, and there ought to be early settlement of some of the large contracts which are usually concluded at this time. Con-sidering the stormy weather business has been brisk. At the Tyne Dock during the past week nearly 94,000 tons were shipped. So far this year there is a considerable improvement in the trade from Tyne Dock—an increase of 40,000 tons—which is the more satisfactory as he shipments last year were very large. Gas coal shows no falling he shipments last year were very large. Gas coal shows no falling off, and prices continue to be well maintained. The Wallsend coal in these rivers continues to go off pretty regularly. Some of the second-class kinds can be had at easier rates, Double screened nuts continue in great request for oversea shipment. Shipments from the Wear to the French and German ports are good. The demand for coke for shipment has fallen off to some extent. The question of restricting the output of coal in this district is not much agriated at restricting the output of coal in this district is not much agitated at the present moment. The idea appears to be gaining ground that such a movement is quite unnecessary. The output is, indeed, pretty well restricted in Northumberland, owing to the slack demand, and in Durham it is also restricted to some extent owing to the reduced enquiry for coking and other coal, and as the summer advances the

demand for house coal must, of course, fall off considerably.

Progress continues to be made here with the electric light. From the experience which has now been gained it is evident that this light will prove extremely useful for collieries, factories, and large works of all kinds. It has been in use some time now at the Page Bank Colliery, near Auckland, where the whole of the surface works and the underground works near the shaft has been lighted by this and the underground works near the shaft has been lighted by this means. The result is certainly a success; a powerful and steady light at such a place is of the greatest consequence, it not only enlight at such a place is of the greatest consequence, it not only ensures quicker dispatch in the work, but also much greater safety in conducting the operations. A trial of the same light on a small scale is shortly to be made at the Hetton Collieries with a view to adoping it extensively if it should prove successful. This light has also been adopted at the shipping places of the Lambton Coal Company on the Wear with the best results. Coal can now be shipped with equal facility by night as well as by day. Previous to the adoption of this light no coal was shipped at night except in cases of great emergency, as the old lights were so very imperfect that the shipping at night was attended with a good deal of risk. This light has also been adopted at several large engine-works, shipbuilding has also been adopted at several large engine-works, shipbuilding places, &c., on these rivers. The Felling Colliery, which has been held by Sir George Elliot for a long period, has been transferred to John Bowes and partners, one of the largest coal mining firms in this district. Felling Colliery is one of the oldest mines on the Tyne, and a large number of coal seams have been proved. The famous Hutton seam is found in great, perfection here; it has been worked Hutton seam is found in great perfection here; it has been worked far on we believe to 80 years, and it is still worked. An explosion occurred here in the year 1812, which caused the loss of upwards of 90 men and boys. The safety-lamp had not then been invented, and of course fiery seams were dangerous to work. Gas, steam, and coking coal is worked. A few years ago the lower seams below the Hutton seam were sunk to, and the coking coal is derived from one

doubt that Scotch and continental buyers will ere long enter the market. The exports from the Tees have, indeed, increased considerably during the past few days. The manufactured iron trade does not show much change. There have, however, been more enquiries, and a fair extent of work is held by many of the manufacturers. Prices are certainly very low, and barely, if at all, remunerative. Bars, 5l. 17s. 6d.; ship-plates, 6l. 5s.; puddled bars, 3l. 15s. The rates of pig-iron are 41s. No. 3. Messrs, Connal's stock is 85,762 tons—a reduction of 1660 tons on the week. The shipbuilding esta-blishments continue busy, and the marine engine and boiler works also continue well employed. The announcement of the amalgamating of an old engineering and shipbuilding company has caused much interest and enquiry. There may be little hesitation in stating that as soon as the names are divulged there will be an eagerness on the part of many to join the company. Into the Tyne, Wear, and Tees there is imported a very large quantity of iron ore. Spain and Portugal, Algeria and Greece, supply the bulk of these ores. They are brought into every district in this county, including the west coast, where there are native hematite ores, very rich, and in great abundance. One of the great causes of the large use of foreign ores is that there is a higher carriage for a few miles of inland carriage. abundance. One of the great causes of the large use of loreign over that there is a higher carriage for a few miles of inland carriage than an ocean carriage of hundreds of miles. It is also held that the royalty, rents, wayleases, &c., are excessive in this county, and those charges increase the cost of the ores so much that they cannot corn Exchange, Atherstone, for the purpose of presenting the Albert

compete in price with foreign ores. It is remarkable that we are making more ore than at any former period, but an increasing proportion is from foreign ores; and one of the needs of the time for the benefit of the great mineral and metallurgical trades is that there should be a full enquiry as to the desirability of changes in the laws of royalties and of the charges that are levied on minerals from the point when they are raised to the smelting furnaces. The growth of the imports of iron ore has been very rapid of late years, as is shown from the official statements, from all parts into the kingdom. In the year 1863 62,167 tons were imported; in 1873, 967,536 tons; in 1878, 1,173,860 tons; in 1880, 2,634,401 tons; in 1882, 3,282,496 tons. A large amount of these ores are brought into the district and consumed at the various works. A large quantity is delivered to the Consett Iron Company, Sir W. Armstrong's works at Elswick, &c. compete in price with foreign ores. It is remarkable that we are Elswick, &c

THE SALT TRADE OF MIDDLESBOROUGH,—Messrs. Bell Brothers, the pioneers of the salt trade at Middlesborough, are successfully the pioneers of the salt trade at Middlesborough, are successfully carrying out their evaporating works at Port Clarence, and have found it necessary to put down a second bore-hole. They have also agreed upon plans for chemical works adjoining the evaporating pans, so that a new industry will be established there shortly. Messrs. Allhusen and Son, managers of the Tyne Chemical Works, have purchased land on the north side of the Tees, near the works of Bell Brothers, and intend to bore for salt also. The Tyne Chemical Company will also, there is little doubt, establish chemical works on the Tees. Messrs. Bolckow, Vaughan, and Co., of Middlesborough, are progressing with their boring for salt. It is reported that a limited company is being formed to take over a large chemical concern, and the names of several leading men in Middlesborough are spoken of as shareholders. It is evident that this remarkable bed cen of as shareholders. It is evident that this remarkable bed spoken of as shareholders. It is evident that t of salt will in time be fully utilised on the Tees.

TRADE IN SOUTH WALES.

Feb. 22.—The course of trade at the principal coal ports is still very active, and prices are firm. The want of dock accommodation becomes every day more manifest at Cardiff. The new dock now being constructed will not be ready for three years, while the projected Barry Dock and Railway will take five years to complete. What the freighters will do in the meantime remains a mystery, were especially if the trade continues to expand at the same rate of more especially if the trade continues to expand at the same rate as it has for the past five years. Swansea is too far away from the Rhondda and Aberdare Valleys to be available, while shipping is more exposed there than at Cardiff. The new railway from Pontymore exposed there than at Cardiff. The new railway from Ponty-pridd to Newport, when open, will help to ease the trade somewhat, and that seems the only relief to be expected for some time. If the dook for which Lord Bute obtained parliamentary powers in 1874 had been made the present difficulties would not have arisen. The amount of coal shipped to foreign ports from Cardiff last week was 126,204 tons, and 13,244 tons coastwise; Newport, 35,513 tons foreign and 9563 tons coastwise; Swansea, 18,265 tons foreign and 6669 tons coastwise. Good colliery-screened stand at 11s. per ton. The house coal trade is good, and the same remark applies to the patent fuel trade.

The Iron and Steel Trades for the moment are somewhat slacker and the iron ore trade suffers in consequence. The amount received in Cardiff last week from Bilbao was 4625 tons, 5340 tons from other sources. Newport received 4640 tons from Bilbao, and 5397 tons from other sources. Prices are lower, and the tendency is still downwards

 Λ case of some importance to landowners respecting mineral rights vas heard at the Glamorganshire Sessions last week, before Lord Justice Brett. Two brothers named Pritchard claimed 52 acres of Justice Brett. Two brothers named Pritchard claimed 52 acres of land, under which were valuable quarries, and which had been owned by Lord Windsor and his ancestors for many years. It appears that there are on the land a number of stones, which are claimed as boundary stones, but whether they are natural stones, as may be seen in many other parts of Wales, or have been placed there by the hand of man, is not positively known. It has been the custom for some years to beat the boundaries in an unofficial manner, and on this custom the plaintiffs relied for their case; but, on the other hand, it was maintained that the tenants only possessed commonable rights. it was maintained that the tenants only possessed commonable rights over the land, a privilege which is granted by large landowners in many parts of Wales and elsewhere. In large estates which are not well looked after many customs prevail of which the absolute owner is improvant, and thus privileges are gained which in the course of is ignorant, and thus privileges are gained which in the cours time make people believe they have an inalienable right to.

time make people believe they have an inalienable right to. A great quantity of evidence was taken on both sides in the case, but in the end a verdict was given for Lord Windsor.

The Tin-plate Trade is very quiet, in consequence of the determination of manufacturers to hold out for higher prices, and an equally strong resolve on the part of buyers not to give them. Large "bear" sales were made some time ago at a low price, and the boxes will have to be delivered, but present prices are too high to enable the speculators to purchase. Good coke-mades may be had from 16s. to 16s. 6d., and charcoal-made from 18s. to 19s. a box.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

Feb. 22.—The demand for coal is unimproved. As to prices, the notations of 11s. and 10s. 6d. respectively for furnace coal in the Dudley district still rule; but they regulate actual basiness in only a putting district shift and; but they regainter actual basiness in only a minor degree, since in respect of the forge qualities there is the competition of the Cannock Chase. For forge coal it is difficult to get more than 7s. per ton long weight. Pig-iron keeps tame, but prices are fairly strong. Derbyshire pigs are 47s. 6d., and hematites 62s. 6d. to 65s., native all mines are 65s., and part mines 59s. The finished iron trade wears a rather better tone by reason of the brighter weather, but the United States tariff uncertainties are interferning with export trade.

weather, but the United States tariff uncertainties are interfernig with export trade. Prices unchanged but easy.

An adjourned meeting of the Cannock and Huntington Colliery Company was held to-day, to consider the offer of Lord Hatherton to contribute 5000% of the 20,000% required to prosecute the undertaking. It was resolved to request his lordship to extend the time allowed for the raising of the additional capital from June next to the same month in 1884, and to ask that his lordship's subscription should be made simultaneously with that of the other shareholders, and not when the latter had raised their 15,000%. It was generally understood that should his lordship decline to accede to the requests understood that should his lordship decline to accede to the requests the additional capital would not be subscribed. The Wednesbury magistrates had before them on Friday Benjamin

Hutton seam were sunk to, and the coking coal is derived from one of these lower seams.

The pig-iron trade has again been very dull, and the transactions have been on a very limited scale; there are more enquiries, but buyers are still cautious, and evidently appear to wish to make better terms if possible, although iron is low enough, and there is little doubt that Scotch and continental buyers will ere long enter the market. The exports from the Tees have, indeed, ingreased const. roller post as it passed between it and the pulley. This, he considered, produced such a strain upon the rope as to cause it to break. He held that the broken strand was a "serious defect," to use in the

the send that the broken strand was a "serious defect," to use in the terms of the 8th special rule. The case was adjourned.

The North Staffordshire Mining Institute annual meeting was held on Monday at Stoke. The report of the Council stated that last year the membership was as follows:—Honorary, 15; ordinary, 263; students, 11: total, 289. Although 12 members and nine students had been elected during the year the number on the register was now 262, or a decrease of 27, the present roll consisting of 15 honorary members, 226 ordinary members, and 21 students. The report of the finance committee stated that there had been an improvement in the finances. The report of the scrutineers showed the following appointments:—President, Mr. James Lucas, Hanley; Vice-predents, Messrs. W. Heath, F. Silvester, and T. E. Storey; treasur Mr. J. G. Bakewell; secretary, Mr. J. Richard Haines. After a sh treasurer paper on the subject of the Channel Tunnel. In the course of the discussion which followed the invasion scare was ridiculed, and the

medals awarded by the Queen to the volunteer searchers, "in recog medals awarded by the Queen to the volunteer searchers, "in recognition of their noble exertions on the occasion of the fire and explasion at the Baddesley Collieries on May 1 and 2, 1882." Lord Leigh, lord-lieutenant of the county, presided, and there was a crowded attendance, amongst those on the platform being the Marchioness of Hastings, Sir Charles Trevelyan, Mr. A. W. Peel, M.P. for Warwick, Dr. Hammond, Mr. C. B. Lowe, Mr. T. Evans (Inspector of Mines), Mr. S. Chamberlayne, Mr. J. C. Fowke, Rev. G. F. Matthews, &c. Lord Leigh expressed the great pleasure which it gave him to have been called upon by the Home Secretary to preside on that interesting occasion, and to have the great honour of presenting the Albert medal to those gallant men who on a recent occasion displayed such medal to those gallant men who on a recent occasion displayed such conspicuous bravery in the immediate neighbourhood. Having sketched the history of the medal, his lordship read documents setting forth the reasons for which the awards were made. His lord, ship afterwards pinned the medals on the recipients as follows.—First-class medal: Mr. Reuben Smallman, mining engineer; Mr. First-class medal: Mr. Reuben Smallman, mining engineer; Mr. Arthur Henry Stokes, Inspector of Mines; Mr. Charles Day, collier; Mr. Charles Chetwyn, collier. Second-class medals: Mr. Samuel Spruce, mining engineer, Tamworth; Mr. Frederick Samuel Marsh, certified colliery manager; Mr. Thomas H. Motteram, colliery manager; Mr. William Morris, collier; Mr. William Pickering, collier; and Mr. Joseph Chetwyn, collier. As the recipients of the medals at the relationship of the medals of the me stepped to the platform they were greeted with warm cheering, and the noble Chairman said he did not believe any brave soldier who had the Victoria Cross presented to him performed a more gallant action than any of these brave men to whom her Majesty had awarded these Albert medals. (Loud applause.) It may be added that Mr. Stokes already wore the silver medal of the Order of St. John, awarded to already wore the silver medal of the Order of St. John, awarded to him for securing a miner who had been entombed in a lead mine five days, under circumstances of peculiar danger, some four years ago. Lord Leigh afterwards read a touching letter he had received from the widow of Mr. Dugdale (the owner of the mine), who lost his life in a noble manner by heroically endeavouring to save the lives of others. His lordship concluded by saying that he had also received a letter from the brother of Mrs. Dugdale (Mr. G. O. Trevelyan), the Chief Secretary for Ireland, of whom they all ought to be proud, who had himself shown conspicuous gallantry on land, and whom they hoped to see shortly rewarded by Ireland being brought to a proper and satisfactory state.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

Feb. 22.- Mining operations in Derbyshire have been rather quiet of late in nearly all districts, so that there is nothing of a special character to be noticed. Lead mining has been going on much as usual, there having been nothing to disturb the ordinary level of the daily routine, and no surprises have taken place. As has been frequently repeated Derbyshire lead mining appears to be tabooed by capitalists and speculators, although there are mines in it that there is every reason to believe could be profitably developed by the introduction of capital; but then the county is not a "sensa-tional" one, in which miners have made hundreds of thousands of pounds, and then been abandoned by those who made large fortunes out of them, and at the same time left still larger fortunes in them. In Derbyshire the lead mines that pay are worked, and several of these have done well where they have been carried on with spirit and backed with capital. There have been a good many, however, where there has been no capital, and consequently have not done much; and it is with respect to some of these that investments might be made to advantage, even at the present time. As it is there are comparatively few mines in the county that may be said to be doing much, if we except those being worked by Mr. Wass, who has certainly spent a great deal of money in machinery and appliances, and which no doubt has paid him well; indeed, it by such means that lead mining just now can be made to

Coal mining in Derbyshire is by no means so good as it was in the earlier part of the year, and what the men have been agitating for has been forced upon them by the actual state of trade. The panacea for low wages has been considered by the chiefs of the mining body—the workers of course—to be a reduction of the work ing hours, so that the limited production would force production would force production come to that Conferences have been field, and a decision come to that the men should only work five days a week, and on Tuesday next another conference is to be held at Manchester, for the purpose of arranging for the simultaneous giving in of notices to terminate existing engagments, so that the short time system can be carried out. In the meantime, however, in Derbyshire, as well as in several other parts of the country, the colliery-owners are only able to find their men five days' work weekly, and in some but four. Prices, too, instead of going up, have come down, and are likely to see a further reduction as the weather becomes fine and mild. The London trade in house coal has fallen off a good deal of late, and this has affected several of the largest collieries in Derbyshire, including those of the Clay coal has fallen off a good deal of late, and this has affected several of the largest collieries in Derbyshire, including those of the Clay Cross Company, Eckington, Langley Mill, and Pilsley, &c., as well as the Annesley and other pits in the adjoining county of Nottingham. As yet no material change has taken place as regards steam coal, although, perhaps, a little more has been lately sent to the Humber from the few pits that are connected with the Manchester, Sheffield, and Lincolnshire Railway. Coal for manufacturing purposes is not in such good request as it was at the commencement of the year, but a tolerably fair tonnage of gas material has been sent away; but the quiet season has now commenced, and the require away; but the quiet season has now commenced, and the requirements of the gas companies are decreasing almost daily. The railway companies continue to take a good deal of hard coal, and the consumption at the ironworks is kept up to the average. A steady business has been done in pig-iron, but bars and rolled iron generally is still in rather moderate request.

The trade of Sheffield continues good, so that there is a heavy The trade of Sheffield continues good, so that there is a heavy output of both iron and steel material. At the rolling-mills there has been marked activity of late, there being large orders in hand for the composite armour-plates, whilst ship-plates are also in brisk request, and evidently will be to the close of the year. There has been an increased production of both Bessemer and crucible steel, a good deal of the former being absorbed by the rail-mills. Some special qualities, however, have been produced for cutlery and steel makers. Heavy orders have been received for rails, but the price at which they have to be taken—51. 5s. to 51. 10s. per ton—does not leave a large margin for profit. The cutlery houses are now working well, large margin for profit. The cutlery houses are now working well, but the run is still on the best qualities of table, pocket, pruning, and fancy knives. There is also plenty doing in edge tools, razors, aws, sheep-shears, and files.

Mr. Pickard, secretary of the South Yorkshire Miners' Association having requested the secretary of the West Yorkshire Coalowners Association, to call a meeting for Thursday last for the purpose of agreeing upon some amicable method of working the restriction scheme, the same was declined, as the masters have agreed not the constitute question. entertain the question

REPORT FROM NORTH WALES, SALOP, AND CARDIGAN.

Feb. 22.—Two heavy falls of rock at the Welsh Slate Company, Festining, will further impede operations. It is said that these fails have buried 12 steam-engines. There are a few signs that the slate have buried 12 steam-engines. There are a few signs that the slate trade is improving, and, unlike the infatuated colliers, the slate quarrymen will only be too glad to work full time. The slate quarry known as Jeremiah, in the Corris Valley, has been taken, and deknown as Jeremiah, in the Corris Valley, has been taken, and development is to proceed forthwith, under the energetic management of Capt. Thomas Williams. The colliers of Buckley Mountain have resolved only to work five days a week. The lead mines in the Llanrwst mining district seem to be revolving around the cycle of changes, being bought and sold with intermediate windings-up. In Cardiganshire, just at present, with few exceptions, lead mining languishes. Work has been resumed at the Cwmgwuen Phosphorite Works by Mr. J. Walter Davies, who was formerly connected with mines in the Island of Corsica. We will resume our journey round Wales next week. Wales next week.

The TITLE-PAGE and INDEX to VOLUME LII., for the year 188 was published in the Mining Journal of Jan 20.

Registration of Bew Companies.

The following joint-stock companies have been duly registered -

THE OVINGHAM BRIDGE COMPANY (Limited).—Cspital 6000l., in shares of 5l. To construct and maintain a bridge and viaduot over the Type. The subscribers are—J. H. Ridley, Prudhoe, 20; J. Greene, Stocksfield, 20; W. Bell, Stocksfield, 20; G. H. Spraggon, Stocksfield, 20; J. Johnson, Ovingham, 20; G. McCoull, Ovington,

Stocksfield, 20; J. Johnson, Ovingham, 20; G. McCoull, Ovington, 1; R. Lumley, Ovington, 1.

LEICESTER LIBERAL CLUB (Limited).—Capital 15,000L, in shares of 1l. The erection and maintenance of said club. The subscribers (who take 50 shares each) are—W. Barfoot, Leicester; F. Hewitt, Knighton; E. Wood, Leicester; H. Sheen, junior, Leicester; W. Baven, Leicester; R. K. Sharpe, Leicester; S. Lennard, Leicester; THE "ACCOMAC" STEAMSHIP COMPANY (Limited).—Capital 38,500L, in shares of 10l. The purchase, owning, and working of this steamship. The subscribers (who take one share each) are—W. W. Tapscott, Liverpool; C. H. Cox, Birkenhead; S. Smith, Liverpool; J. Harvey, Liverpool; W. Tapscott, Liverpool; W. S. Barrett, Liverpool; L. Tapscott, Liverpool.

THE NORTH LONDON GAULT BRICK AND PORTLAND CEMENT COMPANY (Limited).—Capital 25,000L, in shares of 5l. To acquire

THE NORTH LONDON GAULT BRICK AND FORTLAND CEMENT COMPANY (Limited).—Capital 25,000L, in shares of 5L. To acquire by purchase a lease, and fully develope and work certain lands situated at Arlesey, Bedfordshire. The subscribers (who take one share each) are—T. Forskut, 2l, St. Dunstan's Buildings; G. M. R. Layton, Rechampton; R. Pinkney, 1, Bread-street Hill; C. J. Todd, Mitcham; C. T. Layton, Mitcham; C. E. Robinson, 16, Old-square; W. Shillitt, Patrov.

THE "CASTANOS" STEAMSHIP COMPANY (Limited).—Capital 27,600L, in shares of 276L. The business of a steamship owner in all branches. The subscribers (who take one share each) are—T. Morel, Penarth; P. Rawle, Forest Hill; J. A. Gibbs, Cardiff; F. J. Bearen, Cardiff; P. Morel, Cardiff; G. Shapland, Cardiff; W. B. Cardiff; P. Morel, Cardiff; G. Shapland, Cardiff; W. B. Gibbs, Cardiff.

Gibbs, Cardiff.

THE EGREMONT BRICK AND TILE COMPANY (Limited).—Capital 5000l., in shares of 5l. To purchase a certain property situated at Egremont, on the shore of the Mersey, Cheshire, and to continue the manufacture of bricks, tiles, pottery, and all other articles of a similar description. The subscribers (who take one share each) are—W. Spedding, Egremont; C. T. Barnard, Egremont; W. Spedding, sen., Seacombe; W. Hetherington, Liverpool; W. W. Chambers, Liverpool; A. Rowbotham, Birkenhead; J. Chambers, Wallasey.

THE SELANGOR LAND COMPANY (Limited).—Capital 20,0004.

bers, Liverpool; A. Rowbotham, Birkenhead; J. Chambers, Wallasey, The SELANGOR LAND COMPANY (Limited).—Capital 20,000\(\) in shares of 10\(l \). To purchase for the purpose of clearing, planting, calivating, and fully developing a certain property, situated in the district of Klang, State of Selangor. The subscribers (who take one share each) are—R. B. Donnail, Exeter; M. Lister, Clitheroe; J. Taylor, 6, Queen-street-place; T. C. Kellock, Totnes; M. H. Warton, 2, Lombard-court; G. F. Kellock, Totnes; R. Taylor, 6, Open-street-place.

"TERNCLIFFE" STEAMSHIP COMPANY (Limited).

THE "TERNCLIPFE" STEAMSHIP COMPANY (Limited).—Capital 30,000l., in shares of 50l. Purchasing, owning, and working said steamer. The subscribers (who take one share each) are—D. K. Morgan, Newport; J. E. Lewis, Newport; B. Lewis, Abergavenny; T. Lewis, Fennyside; A. Williams, Newport; G. B. Batchelor, Woodbank; A. E. Batchelor, 73, Jernyn-street.

THE LANGWORTH SPINNING COMPANY (Limited).— Capital 20,000l., in shares of 10l. To purchase, prepare, spin, manufacture, and deal in cotton yarn and other fibrous products and materials. The subscribers (who take 10 shares each) are—P. Crook, jun., Bolton; G. Hopwood, Runwoorth; G. Warbutton, Turton; J. Warbutton, Turton; J. Haslam, Bolton; E. Haslam, Bolton; S. Whittaker, Halliwell.

CLEAVER AND MIST'S CEMENT WORKS COMPANY (Limited). Capital 50,000%, in shares of 50. To acquire a property at Sitting-bourne, and to carry on the business of manufacturers and merchants of cement and plaster, to deal in lime, bricks, tiles, &c. The subscribers (who take one share each) are-J. B. Harper, Lee; L. G. B. How, Clapham; J. S. Stallard, 24, St. Luke's-road; A. Barnard, Billiter House; C. L. Tokely, East Dulwich; T. E. G. Berry, Brixton; A. C. Harper, Billiter House.

How, Clapham; J. S. Stallard, 24, St. Luke's-road; A. Barnard, Billiter House; C. L. Tokely, East Dulwich; T. E. G. Berry, Brixton; A. C. Harper, Billiter House.

The Harlech Sulphur Mining Company (Limited).—Capital 50,000L, in shares of 1L. To purchase, lease, or otherwise acquire and work certain sulphur mines, situated in the county of Merioneth, according to the terms of an agreement made between J. B. Banner of the one part, and H. Gore as trustee on behalf of the company. To reader marketable, sell, and dispose of the minerals so acquired, and to grant or sell licenses for the working of the whole or any parts of said properties. The subscribers (who take one share each) are—H. Tarpley, Liverpool, metal broker; E. L. Owen, 41, Threadneedlestreet, mining engineer; A. C. Darby, Orrell, banker; A. Love, Liverpool, shipbroker; T. S. Ford, Liverpool, accountant; S. Lord, Southport, cotton broker; E. Oliver, 104, Cheapside, shipowner. No Articles of Association have been registered.

The Metal Band Mining Company (Limited).—Capital 15,000L, in shares of 1L. To acquire by purchase or otherwise the Tees-side, Providence, Metal Band, and Hood Crag Mines, situate at Tynehead, in the parish of Alston, county of Camberland, with the plant and machinery belonging thereto, and for this purpose to adopt and carry into effect an agreement made between J. H. Robinson and others of the one part, and W. Hind on behalf of the company. To search for, get, win, work, raise, smelt, manufacture, sell, or dispose of and deal in lead, lead ore, barytes, and other minerals and substances raised, purchased, or obtained by the company. The subscribers (who take one share each) are—T. Gray, Newcastle-on-Tyne, lead mine owner; T. R. Barker, South Shields, gentleman; H. Pritchard, Newcastle-on-Tyne, edder-tising lessee; J. H. Robinson, Newcastle-on-Tyne, lead mine owner; T. R. Barker, South Shields, gentleman; H. Pritchard, Newcastle-on-Tyne, woollen draper: T. Shildon, Carbridge, chemical manufactures; W. Scott, Newcastle-on-Tyne, con

E. C. Sline, Liverpool.

THE ASSOCIATED PROPRIETORS IN THE ROYAL SWEDISH RAIL war Company (Limited).—Capital 688,000l, in shares of 4l. and 5l. To acquire by purchase or otherwise the obligations, preference and ordinary shares, or any of them of the Royal Swedish Railway Com-To acquire by purchase or otherwise the Coulomb States of the Royal Swedish Railway Condinary shares, or any of them of the Royal Swedish Railway Company. To lend money to such company, and to borrow or raise money upon bonds, debentures, bills of exchange, &c. The subscribers (who take one share each) are—W. R. Hunt, 39, Smithstret; W. H. S. Feldwick, Sevenoaks; C. L. Lewis, 32, Tressilliantoad; H. Lowry, 18, Highbury-place; R. de la Bère, Stock Exchange; P. W. Smyth, Stock Exchange; S. C. Paine, Stock Exchange.

The # E. C. Powder Company (Limited).—Capital 70,000/L, in and to purchase the subscribe and the subscribe and the subscribe and to purchase the subscribe and the subscri

P. W. Smyth, Stock Exchange; S. C. Paine, Stock Exchange.

THE "E. C." POWDER COMPANY (Limited).—Capital 70,000L, in shares of 5L. The manufacture of explosives generally, and to purchase, sell, and deal in explosives and all materials and articles required for their manufacture. The subscribers (who take one share seh) are—F. Lamb. 70, Coleshill-street; F. T. Y. Archer, 310, Southwark Park-road; A. Wright, 12, Bishopsgate-street Within; H. L. Fox, Uj per Norwood; R. S. Garbutt, Highbury; S. B. Charlewood, 36, Bury-street; J. A. Norton, Anerley.

HOLLOWAY'S PILLS.—In order that the elightest indisposition may not apidly run its disastrons course from bad to worse, the afflicted of every age and class should give it immediate attention. A few doses of these thoroughly purifying and strengthening pills will always be beneficial when the least disorder regms, or when nervous fears oppress. Two or three pills at bed time have the appliest effort in promoting perfect digestion, whereby the muscles are rendered more vigorous, the spirits more buoyant, and the entire frame more hardy. Bolloway's medicine increases the quantity of not riment derivable from a given quantity of food, and so the quality of food, and so the quality of the blood is improved, the true of every five throughout the body is heightened, and the disposition to fall into disease a reduced to a minimum.

Utilisation of Bye-Products in Coke Making.

SIMON-CARVES PATENT PROCESS.

EXTRA PROFIT REALISABLE PER TON OF COKE MADE FROM 4s. то 6s.

NOW IN VERY SUCCESSFUL OPERATION AT

Messrs. PEASE and PARTNERS, Durham,

Apply for particulars to the Patentee-

H. SIMON, C.E., 7, St. Peter's Square, Manchester.

DEUTSCHE SPRENGSTOFF ACT.-GES.

(GERMAN EXPLOSIVES COMPANY, LIMITED),

HAMBURG.



YNAMITE

Of the HIGHEST DESCRIPTION, and of the maximum strength allowed by the British Explosives Act (75 per cent. Nitroglycerine).

CHAIRMAN - - Dr. C. E. BANDMANN Late Fartners of Messrs. A. Nobel and Co., of Hamburg, GENERAL MANAGERS Mr. C. F. CARSTENS

Mr. C. WICHMANN, Late Partner of Messrs Bessler. Waechter, and Co., London.

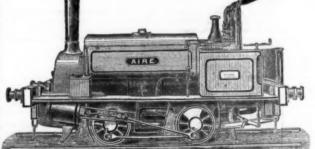
HEAD OFFICE: HAMBURG, PLAN 9.

LONDON AGENTS: Messrs. KALTENBACH AND SCHMITZ, 46, NEW BROAD STREET, E.C. SHIPMENTS EFFECTED TO ALL PARTS. STOCK KEPT IN LONDON AND NUMEROUS COUNTRY MAGAZINES.

AGENTS WANTED IN THE COLONIES.

ESTABLISHED 1860.

HUDSWELL, CLARKE, ANDLEEDS.



LOCOMOTIVE TANK ENGINES

OF ALL SIZES AND ANY GAUGE OF RAILWAY. OF GREATLY IMROVED CONSTRUCTION FOR MAIN OR BRANCH RAILWAYS. CONTRACTORS, IRONWORKS, COLLIERIES. For Cash or Deferred Payments.

SOLE MAKERS OF RODGERS' PATENT WROUGHT-IRON PULLEYS.

The Only Knapping Motion Stone Breaker and Ore Crusher.

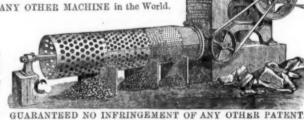
AWARDED THE ONLY SILVER MEDAL FOR MECHANICAL EXHIBITS AT THE ROYAL CORNWALL POLYTECHNIC SOCIETY,

FALMOUTH, SEPT., 1881. GUARANTEED to do MORE WORK with less power THAN ANY OTHER MACHINE in the World READ THIS-

The Bold Venture Lime and Stone Co., Peak Forest, Messrs. W. H. Baxter and Co.,

Gentlemen,—We have the pleasure to inform you that the 20 by 9 Stone Breaker supplied by you is now working to our entire satisfaction, and we are now able to fulfil our contract with ease, which we had much difficulty in doing before with the

Blake Machine. It takes less power and turns out considerably Yours truly, BOLD VENTURE LIME AND STONE COMPANY



AWARDED THE ROYAL MANCHESTER, LIVERPOOL, AND NORTH LANCASHIRE AGRICULTURAL SOCIETY'S SILVER MEDAL, 8TH OF SEPTEMBER, 1882.

FOR FULL PARTICULARS ADDRESS TO THE PATENTEES AND SOLE MAKERS,

W. H. BAXTER & CO., ALBION STREET, LEEDS.

THOMAS GREEN AND SON (LIMITED), ENGINEERS, BLACKFRIARS ROAD, LONDON, S.E.

WORKS. MANCHESTER

NEAR VICTORIA STATION, MANCHESTER. (ESTABLISHED 1790).

AND CO., JOHN STANIAR

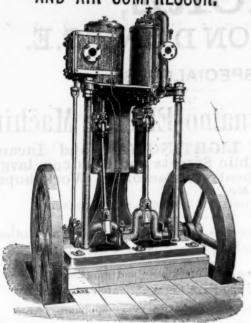
Manufacturers by STEAM POWER of all kinds of Wire Web, EXTRA TREBLE STRONG for

LEAD AND COPPER MINES.

Jigger Bottoms and Cylinder Covers woven ANY WIDTH, in Iron, Steel, Brass, or Copper. EXTRA STRONG PERFORATED ZINC AND COPPER RIDDLES AND SIEVES.

PERFORATED IRON, STEEL, COPPER, AND ZINC PLATES IN VARIOUS DIMENSIONS AND THICKNESSES, Shipping Orders Executed with the Greatest Dispatch'

"Champion" Rock-borer AND AIR COMPRESSOR.



The work performed by this machinery, through some of the hardest rock, proves its great value.

In Cornwall, irrespective of the work done by the "Champion" Rock-borers purchased by various Mines, the drivage, rising, stoping, and sinking on the proprietor's own contract work, amounts to over 940 fathoms.

The wood-cut represents one of these Air-Compressors. Four of them, of three different sizes, can be seen, at work, in about an hour's walk through the Camborne Mining Dis-

R. H HARRIS,

ENGINEER, 63, QUEEN VICTORIA STREET, LONDON

PATENT DUPLEX LAMPS.

FOR COLLIERIES, IRONWORKS &c., SUITABLE FOR

Pit Banks, Engine-Houses, &c., &c.



Each Lamp gives a light equal to 26 candles.

No breaakge of Chimneys from Heat

S. HOOPER,

CLOSE TO NEW STREET STATION,

Lower Temple Street, BIRMINGHAM.

Illustrations on application. special attention has been given to making these LAMPS THOROUGHLY WINDPROOF.



By a special method of preparation this leather is made solid, perfectly close in exture, and impermeable to water; it has, therefore, all the qualifications essential for pump buckets, and is the most durable material of which they can be used. It may be had of all dealers in leather, and of—

HEPBURN AND GALE,

TANNERS AND CURIERS,

LEATHER MILL BAND AND HOSE PIPE MANUFACTURERS,

LONG LANE, SOUTHWARK LONDON

Prize Medals, 1851, 1855, 1678, for

MILL BA DS, HOSE, AND LEATHER FOR MACHINERY PURPOSES.

JOHN ROBERTSON, F.S.A., MINING AND CONSULTING
ENGINEER, LAS VEGAS, NEW MEXICO.

Mines and Mining Claims carefully examined, Assays made of their Ores, and
reliable Reports furnished.

Mining Properties bought and sold on commission. Has special facilities for
nepecting properties in Mexico.

References by permission:—L. P. Browne, Esq., Las Vegas, New Mexico; Don
P. A. MANZANARES, Las Vegas, New Mexico; His Excellency H. M. HOYT, Governor of Pennsylvania, Harrisburg, Pa.; H. S. PIERCE, Esq., Banker, Scranton,
Pa.; Hon, John Handley, President Judge 45th Judicial District, Scranton,
Pa.; Hon, John Handley, President Judge 45th Judicial District, Scranton,
Pa.; N. SHAPER, Esq., Cashier Third National Bank, Scranton, Pa.; E. B.
SFURGES, Esq., Attorney-at-Law, Scranton, Pa.; E. W. WESTON, Esq., General
Agent Delaware and Hudson Canal Company, Providence, Pa.; Hon, Sir John
F. CLARKE, Baronet, Tilliepronie, Aberdeenshire, Scotland: R. L. CHARGE, Esq.,
Birmingham, England; FERCYVALE TAYLOR, Esq., of John Taylor and Son, 6,
Queen-street-place, London; Joseph Robertson, Esq., 17, Tokenhouse-yard,
London.

PHILLIPS' MONTHLY MACHINERY REGISTER.—

PURCHASE OR SALE

EW OR SECONDHAND MACHINERY

Subscription, 4s. per annum, post free.

DUBLISHED AND DROPRIETOR CHARLES D. PHILLIPS, NEWPORT, MON.

THE IRON AND COAL TRADES REVIEW

The IRON AND COAL TRADES REVIEW is extensively circulated amongst the fron Producers, Manufacturers, and Consumers, Coalowners, &c., in all the fron and coal districts. It is, therefore, one of the leading organs for advertising every description of Iron Manufactures, Machinery, New Inventions, and all matters relating to the Iron Coal, Hardware, Engineering, and Metal Trades in general.

Offices of the Review: 7, Westminster Chambers, S.W.

Remittances payable to W. T. Pringle,

CLAYTON AND SHUTTLEWORTH, STAMP END WORKS, LINCOLN, AND 78, LOMBARD STREET, LONDON

The Royal Agricultural Society of England have awarded Every First Prize to CLAYTON and SHUTTLEWORTH for Portable and other Steam Engines since 1863, and Prizes at every Meeting at which they have competed since 1849.



Steam Engines, portable & fixed

(For Coals, Wood, Straw, and every kind of Fuel

Thrashing Machines.

Straw, Corn, and Hay Elevators, Chaff Cutters for Steam Power. Grinding Mills.

Saw Benches.

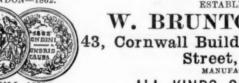
Traction Engines, &c.

GOLD MEDALS AND OTHER PRIZES have been awarded to CLAYTON AND SHUTTLEWORTH at all the importan International and Colonial Exhibitions, including
LONDON, 1851 and 1862; PARIS, 1855, 1867, and 1878; VIENNA, 1857, 1866, and 1873

Catalogues in English and all European Languages free on application.

NOTE.—To insure deliveries in time for the next season, C. and S. beg their Foreign and Colonial Friends will not delay giving their orders.

LONDON-1862



ESTABLISHED 1848.

W. BRUNTON AND CO., 43, Cornwall Buildings, Queen Victoria Street, London,

ALL KINDS OF SAFETY FUSE.

SILVER MEDAL (HIGHEST AWARD), MELBOURNE EXHIBITION, 1881, for

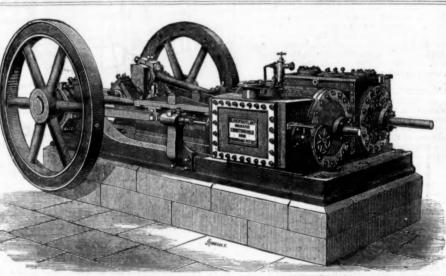
"EXCELLENCE OF MANUFACTURE."

orks: Penhellick Safety Fuse Works, Redruth, Cornwall and Cambrian Safety Fuse Works, Wrexham, North Wales. LIVERPOOL OFFICE-8A, ALBERT BUILDINGS, PREESON'S ROW.



FURNISHED

INSTRUCTIONS



STREET, CHARING CROSS

JOHN MARSDEN,

Air Tubing and Improved Brattice Cloth,



Tarred, Oiled, and Non-Inflammable.

THE OILED CLOTH IS ESPECIALLY RECOMMENDED FOR DAMP MINES, AND IS ALSO A GOOD COVERING FOR SHEDS. THE NON-INFLAMMABLE FOR THE MORE DANGEROUS MINES,

Samples and prices free, on application at the Works,

VARLEY STREET, OLDHAM ROAF, MANCHESTER.

ALSO MANUFACTURER OF PACKING FOR ENGINES, PUMPS, &c., and STEAM HAMMER RINGS

POTENTITE.

This unrivalled Explosive, as manufactured by the New and Perfected Machinery of the Company, is perfectly safe for transit, storage, and use, and is employed in every description of Mining or Quarrying Work, for Tunnelling, Pit Sinking, Engineering Work, and Submarine Operations, with the most complete success and satisfaction.

Potentite does NOT contain its own MEANS OF IGNITION, is free from Nitro-Glycerine, and its SAFETY has been specially demonstrated by public experiments.

In action it gives off neither flame, smoke, nor offensive small. But its real laboration is certain.

Its strength is unequalled.

Its action is certain,
In action it gives off neither flame, smoke, nor offensive smell By its use labour is economised, as work can be resumed immediately er the shot is fired.

POTENTITE is specially adapted for export to hot climates, as it is unaffected by heat, and is free from dangerous exudations.

POTENTITE IS THE SAFEST STRONGEST, AND WORK FOR WORK, CHEAPEST EXPLOSIVE IN THE MARK For particulars and prices, apply to the-POTENTITE COMPANY, LIMITED.

HEAD OFFICE—3, FENCHURCH AVENUE, LONDON, E.C.

ON RIB

ed

ors.

er.

FURNISHED

WORKING

SCHRAM'S

S

ng

lly

ly

COMPLETE

WORKING

OUTFITS

SUPPLIED

WILLIAM ELMORE. BLACKFRIARS ROAD, LONDON, S.E.

SPECIALITIES.

"Elmore" Dynamo-Electric Machine "Elmore" Dynamo-Electric Machine

Special Polishing Machinery and Materials.

SPECIAL ELECTRO-DEPOSITING SOLUTIONS

For depositing Copper in any thickness upon rough castings or polished Iron objects of any size or weight, Lecomotive Boiler Tubes, Iron Railings, Ornamental Lamp Posts, Garden Seats, Iron Sheets, and parts of heavy Iron Structures.

For depositing Brass upon Ornamental Iron Work, Fenders, Fire Irons, Locks, Bright Steel
Goods, and upon articles made of Lead, Pewter, Zinc, Tin, and Britannia Metal.

For depositing Tin upon Bright Steel Goods, or upon rough Iron. The insides of Iron or Copper Pans, Kettles, and Culinary Utensils (Chemically pure).

For depositing Copper reproductions of Art Subjects, Stove and Door Panels, Flates, Medallions, &c., from Plaster, Wax, or other Moulds.

For Covering the most delicate Forns, Flowers, Insects, &c., by which perfect facsimiles can be obtained in Copper and finished in Silver, Gold, or other Metals, or various coloured oxides, forming the most elegant ornaments which can be manufactured at a nominal cost.

For depositing Electrotypes for Printers, Steel Plate and Bank Note Engravers, &c.

For depositing Steel or Nickel upon Copper Electrotypes, to protect the surfaces from the action of Mercurial Inks, and at the same time preserving the clear brilliancy of vermillion, and other colours having mercury in their composition.

For depositing Tin upon the backs of Electrotypes, completely superseding the old method. For depositing Gold, Silver, Nickel, Bronze, Zinc, &c., in Electro-Plating

SPECIALITIES.

For ELECTRIC LIGHTING (Arc and Incandescence) for Public Streets and Gardens, large Open Spaces, Theatres, Factories, Workshops, Hotels, Houses, &c.
ENTIRE SYSTEM COMPLETE, EFFICIENT, AND INEXPENSIVE.

Special Apparatus for the application of Ozone and other Gases for Bleaching Oils, Sugars, Fabrics, &c.

Elmore" Machines and appliance for Complete Outfits. TIN-PLATE MANUFACTURE.

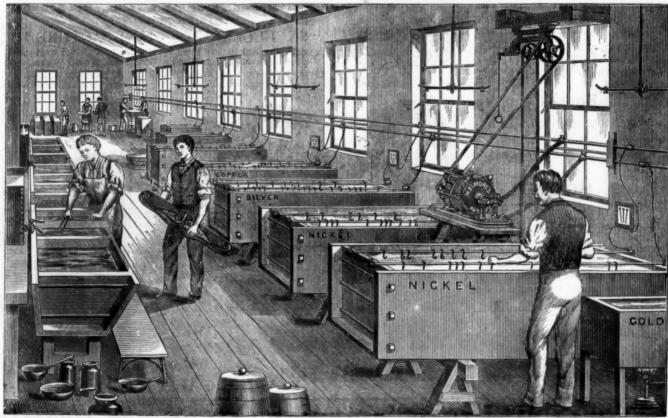
"Elmore" Machines and appliance for Complete Outfits. GALVANIZING.

"Elmore" Machines and appliance for Outfits. REFINING METALS

Complete Outfits. The "Elmore" Machines and appliance for EXTRACTING METALS FROM ORE. "Elmore" Machines and appliance for Complete

GENERATING OXYGEN.

Hydrogen, Chlorine, Ozone, and other Gases...



Outfits.

The above represents an Electro-Plating Works in which an "ELMORE" PATENT DYNAMO-ELECTRIC MACHINE is being used for the simultaneous deposition of Nickel, Silver, Copper, Bronze, Brass, Gold, Tin, Zinc, &c., from their Solutions.

TESTIMONIALS, &c.

From the "HARDWARE TRADE JOURNAL."

"Mr. WILLIAM ELMORE, of 91, Blackfriars Road, London, S.E., is busily engaged fitting up the Art Metal Depositing Works of the Electrolytic Company, Charlotte Street, Blackfriars. The Electro-plating tanks of nickel, copper, brass, zinc, and tin, holding several thousands of gallous each (worked by an 'Elmore' Patent Dynamo-Electric Machine, capable of depositing about 500 lbs. of metal per day), and the specially designed and constructed polishing machinery will all combine to constitute this most gigantic and complete arrangement of the kind in the world. Here boiler tubes, each over 20 ft. in length, may be coated with copper, large ornamental iron lamp posts, and similar massive iron structural objects of great weight may be covered with electro-deposited copper, forming, when finished, a complete shell of bronze, which may be nickel-plated, or even silver-plated, if desired, Large rough or polished iron surfaces may be coated with brass, or zinc, or tin. Copper electrotype copies are taken of art subjects, the reproduction being so perfect that the process is used for multiplying plates from which bank-notes are crinided, and the most delicate ferns, flowers, leaves, and insects are capted with copper, and afterwards with gold, silver, nickel, &c., for use as ornaments of various kinds. Fenders, fire-irons, grates, &c., may be brassed. The largest marine engines may be nickel-plated in the large nickel-plating plant, worked by the powerful Elmore' machine with ease and certainty, which only a few months since would have been pronounced almost impossible. The Electrolytic Company, we understand, express perfect attifaction with the work aiready completed by Mr. Elmore, and there is no doubt that with that gentleman's large practical experience the company could not have been in better hands. The entire premises will be lighted by the 'Elmore' system of electric light."

From the 'LONDON MINING JOURNAL'.

From the "LONDON MINING JOURNAL."

"The new 'Elmore' Dynamo-Electric Machine can be seen in operation in London, and is considered one of the most wonderful scientific apparatus which has yet been brought before the public; it should be inspected by all who are interested in any kind of metallurgical operations."

"Mr. ELMORE has just received two pieces of ordnance from Her Majesty's Works at Chatham, with an order to nickel-plate the same, together with the carriages upon which they are mounted. Mr. Elmore has done similar work for the Government on previous occasions, and it will be remembered that the screw propellers used on the torpedo boats were nickel-plated by him. The 'Elmore' Dynamo-Electric Machines and complete electro-plating outlits have been supplied to Government Departments at home and abroad."

From the NICKEL PLATING COMPANY,
13, GREEK STREET, SOHO.

Your Machine does its work most satisfactorily, and has never once reversed current,
which the Weston Machine frequently did."

From the ELECTROLYTIC COMPANY,

ART METAL DEPOSITING WORKS, CHARLOTTE STREET, BLACKFRIARS, LONDON.

"The 'Elmore' Dynama-Electric Machine and entire outfit which you have supplied to this company have iven perfect satisfaction."

From the NICKEL AND SILVER PLATING WORKS.

2, CHARLES STREET, CURTAIN ROAD, E.C.

"Having had one of the 'Elmore' Patent Dynamo-Electric Machines in constant use for several months, it gives me great pleasure to say that with it I have been able to deposit four times the weight of metal per day which I had been enabled to do with the Dynamo-Electric Machine, which it has displaced in my establishment."

From the LONDON NICKEL PLATING COMPANY.

"We have much pleasure in expressing our entire satisfaction with the nickel-plating solution, anodes, and Dynamo Machine that you have supplied us with.

From the DYNAMO-ELECTRIC PLATING WORKS.

2, OLD SWAN LANE, LONDON.

"The quality of the nickel solutions and anodes at these works, which were supplied by you, is most satisfactory in every way.

The Dynamo Machine also works excellently, and has given no trouble whatever since it has been started." AND MANY OTHERS.

Dynamo-Electric Machines, Outfits, &c., supplied to (London) Messrs. Thos. De la Rue and Co., Cassell, Petter, and Galpin, The India Rubber Company (Limited), Silvertown, The Nickel Plating Company, Joseph Woodricka, Kelly and Co., A. S. Cattell and Co., &c., &c., (Birmingham) Messrs. Wright and Butler, Joseph Woodward, The Griffin Gilding and Plating Company, and over 500 others.

SENL FOR COMPLETE DESCRIPTIVE CATALOGUE, PRICE 6D.

PARIS EXHIBITION, 1878. GAINED THE GRAND PRIZE. THE TRIPLE AWARD. Gold Medal, Silver Medal, and Honourable Mention in competition with all the World.

THE BLAKE-MARSDEN NEW PATENT IMPROVED STONE BREAKERS AND ORE CRUSHERS.

ORIGINAL PATENTEE AND ONLY MAKER.

ALSO PATENTEE AND ONLY MAKER OF THE

CRUSHER OR PULVERIZER PATENT

FOR REDUCING TO AN IMPALPABLE POWDER, OR ANY DEGREE OF FINENESS REQUIRED,

GOLD QUARTZ, SILVER, COPPER, TIN, ZINC, LEAD, AND ORES OF EVERY DESCRIPTION;

Also Cement, Barytes, Limestone, Chalk, Pyrites, Coprolite, &c., &c. These Machines are in successful operation in this country and abroad, and reference to users can be had on application. AWARDED OVER

PATENT REVERSIBLE CUBING and CRUSHING JAWS, IN FOUR SECTIONS, WITH PATENT FACED BACKS, REQUIRING NO WHITE METAL IN FIXING.

NEW PATENT CRUCIBLE CAST-STEEL CONNECTING RODS.
NEW PATENT RENEWABLE TOGGLE CUSHIONS, &c.

OVER 4000 IN USE.

EXTRACT FROM TESTIMONIALS. PULVERISER.

"I have great pleasure in bearing testimony to the merits and capabilitie sof your patent combined fine crusher and sieving apparatus. I have tried it on a variety of orea and minerals, and it puverizes them with equal success. You can put in a small paving stone, and bring it out like flour."

"The power required to drive it is very small, being from 4 to 5-horse, and the repairs are almost nil."

"I am sure the mechine will be a success, and a great one, and there is any amount of demand for such a machine. We can work it with 20 bs. of steam, and our engine, which is a 12-h.p., plays with the work, in fact we r un the Stonebreaker and the Pulveriser both together with 35 lbs."

FLY-WHEELS ON BOTH SIDES.

FOR CATALOGUES, TESTIMONIALS, &c., APPLY TO THE SOLE MAKER,

ADOPTED BY THE PRINCIPAL CORPORATIONS, CON. TRACTORS, MINING COMPANIES, &c., IN ALL PARTS OF THE WORLD. ROAD METAL BROKEN EQUAL TO HAND, AT ONE-TENTH THE COST.

EXTRACTS FROM TESTIMONIALS,
STONEBERAKER.
"The 15 × 8 stonebreaker gives perfect satisfaction. It produces a more cubical stone than any others I have seen at work."
"Your 15 × 10 machine makes the best road metal I have ever seen put through a machine—in fact, comparing favourably with hand-broken."

60

FIRST-CLASS GOLD AND SILVER MEDALS.

broken."
"Your 10 × 7 crusher at the Aruba Gold Mines will crush 90 to 100 tons per 24 hours of the hardest gold quartz to 1 'size."
"Some of your testimonials do not give your machines half their due. I have seen men hammering away on a big rock for a quarter of a day which your machine would reduce to the required size has quarter of a minute. I would guarantee that your largest size machine would reduce more of the Cornish tin capels (which is the hardest rock of England) in a day than 200 men, and at 1-25th the cost."

GREATLY REDUCED PRICES ON APPLICATION.

MARSDEN, SOHO FOUNDRY, LEEDS. R.

STEAM PUMPS

COLLIERY PURPOSES.

Specially adapted for forcing Water any height ALSO, FOR

SINKING, FEEDING BOILERS AND STEAM FIRE ENGINES.

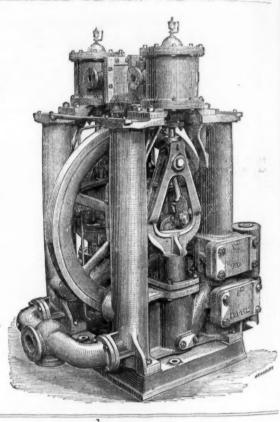
which he has made over 8000.

ALSO, HIS

PATENT CAM AND LEVER

PUNCHING SHEARING MACHINES.

Works: Oldfield Road, Salford, Manchester.



FOR MINES, QUARRIES, AND GOVERNMENT CONTRACT -WORK,

MACDERMOTT'S PATENT

PERCUSSIVE ROCK PERFORATOR,

FOR HAND-LABOUR ONLY,



RATE OF PENETRATION, IN GRANITE,

11 to 2 inches per minute.

Price £44 complete.

For particulars, apply to the Proprietor and Patentee:-

M. MACDERMOTT.

25 and 26, PUDDING LANE, LONDON, E.C.





TRAMWAYS

Of all descriptions on the Single and Double-Rope Systems; Self-Acting, and Driven by Steam, Water, or Horse Power.

Carrying from 50 to 1,000 tons per day Over 150 miles erected in all parts of the world. For Particulars and Estimates apply to W. T. H. CARRINGTON, 9, and 11, Fenchurch Avenue, London,

Removed from 76, Cheapside, E.C. ENGINEER AND MANAGER TO THE OWNERS OF THE PATENTS FOR WIRE ROPE TRANSPORT.

WOOD ASTON AND CO., STOURBRIDGE

(WORKS AND OFFICES ADJOINING CRADLEY STATION), Manufacturers of

CRANE, INCLINE, PIT AND CHAINS, Also CHAIN CABLES, ANCHORS, and RIGGING CHAINS, IRON and STEEL SHOVELS, SPADES, FORKS, ANVILS, VICES, SCYTHES, HAY and CHAFF KNIVES, PICKS, HAMMERS, NAILS, RAILWAY and MINING TOOLS, FRYING PANS, BOWLS, LADLES, &c., &c.

Crab Winches, Pulley and Snatch Blocks, Screw and Lifting Jacks, Ship Knees, Forgings, and Use Iron of all descriptions

WELDED STEEL CHAINS { FOR GRANES, INCLINES, MINES, &C.,

Printed by Richard Middleton, and published by Henry English (the proprietors) at their offices, 28, Flest Street, where all communications are requested to be addressed.—February 34, 1813.

No. 2480

MR. JAMES

No. 1, BUSINESS transa British and Foreig ways, Insurance, Water, and Dock B BUSINESS negocia

Every Friday which will be prices of the we BANKERS: CITY E

SPECIAL DEALING Seriat Death) Almada, 16s.) Bedford Uni., 25 Sratsberg, 37s.) Carlarvon Cop.) Calleo Bis.) Colombian Hyd.) Cosolidated, 6s.) California, 20s.) Davala Cen., 4s.) Davala Moyar, 9 10 Davon Consols, 4

* SHARES SOI MON! * SPECIAL B and LEAD SHARI

RAILWAYS opened on I FOREIGN

Accounts op MERICAN tnightly Acco

NDIAN GOL

.* Reliable in contag of

ELECTRIC

EAST WHE MR. W. H

BUBLEN